US009213468B2

(12) **United States Patent**
Zaman et al.

(10) **Patent No.: US 9,213,468 B2**
(45) **Date of Patent: *Dec. 15, 2015**

(54) **APPLICATION REPORTING IN AN APPLICATION-SELECTABLE USER INTERFACE**

(71) Applicant: **Microsoft Corporation**, Redmond, WA (US)

(72) Inventors: **Nazia Zaman**, Kirkland, WA (US); **Adrian J. Garside**, Sammamish, WA (US); **Christopher T. Bush**, Redmond, WA (US); **Lindsey R. Barcheck**, Seattle, WA (US); **Chantal M. Leonard**, Seattle, WA (US); **Jesse Clay Satterfield**, Seattle, WA (US)

(73) Assignee: **Microsoft Technology Licensing, LLC**, Redmond, WA (US)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

This patent is subject to a terminal disclaimer.

(21) Appl. No.: **14/109,779**

(22) Filed: **Dec. 17, 2013**

(65) **Prior Publication Data**

US 2014/0109008 A1 Apr. 17, 2014

Related U.S. Application Data

(63) Continuation of application No. 12/978,184, filed on Dec. 23, 2010, now Pat. No. 8,689,123.

(51) **Int. Cl.**
G06F 13/00 (2006.01)
G06F 15/00 (2006.01)
(Continued)

(52) **U.S. Cl.**
CPC ***G06F 3/0482*** (2013.01); ***G06Q 10/107*** (2013.01); ***G06Q 50/01*** (2013.01); *H04L 67/26* (2013.01)

(58) **Field of Classification Search**
CPC G06F 3/0482; H04L 67/26; G06Q 10/107
USPC 715/767, 808, 751–753, 763–765, 854, 715/810, 727
See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

4,823,283 A 4/1989 Diehm et al.
5,045,997 A 9/1991 Watanabe
(Continued)

FOREIGN PATENT DOCUMENTS

CN 1326564 12/2001
CN 1734440 2/2006
(Continued)

OTHER PUBLICATIONS

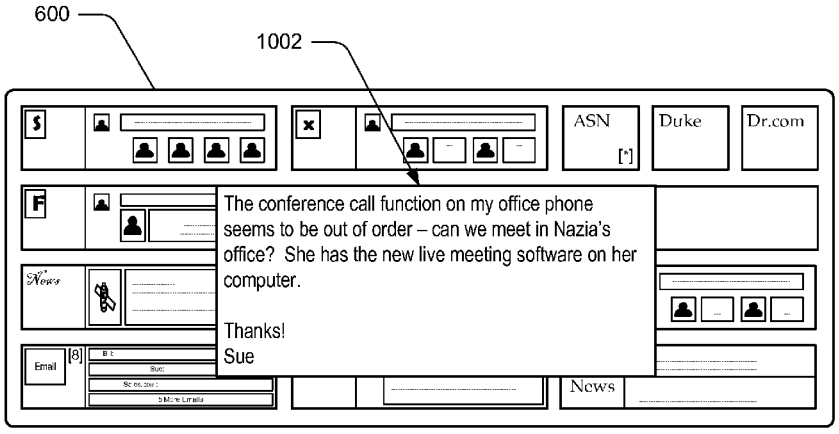
"Final Office Action", U.S. Appl. No. 13/073,300, Apr. 1, 2014, 14 pages.
(Continued)

Primary Examiner — Kevin Nguyen
(74) *Attorney, Agent, or Firm* — Jim Banowsky; Kate Drakos; Micky Minhas

(57) **ABSTRACT**

This document describes techniques for application reporting in an application-selectable user interface. These techniques permit a user to view reports for applications in a user interface through which these applications may be selected. By so doing, a user may quickly and easily determine which applications to select based on their respective reports and then select them or their content through the user interface.

20 Claims, 11 Drawing Sheets



(51) **Int. Cl.**

G06F 3/0482	(2013.01)
G06Q 10/10	(2012.01)
G06Q 50/00	(2012.01)
H04L 29/08	(2006.01)

(56) **References Cited**

U.S. PATENT DOCUMENTS

5,046,001	A	9/1991	Barker et al.
5,189,732	A	2/1993	Kondo
5,258,748	A	11/1993	Jones
5,297,032	A	3/1994	Trojan et al.
5,321,750	A	6/1994	Nadan
5,339,392	A	8/1994	Risberg et al.
5,432,932	A	7/1995	Chen et al.
5,463,725	A	10/1995	Henckel et al.
5,485,197	A	1/1996	Hoarty
5,495,566	A	2/1996	Kwatinetz
5,506,951	A	4/1996	Ishikawa
5,510,808	A	4/1996	Cina, Jr. et al.
5,515,495	A	5/1996	Ikemoto
5,574,836	A	11/1996	Broemmelsiek
5,598,523	A	1/1997	Fujita
5,611,060	A	3/1997	Belfiore et al.
5,623,613	A	4/1997	Rowe et al.
5,640,176	A	6/1997	Mundt et al.
5,650,827	A	7/1997	Tsumori et al.
5,657,049	A	8/1997	Ludolph et al.
5,659,693	A	8/1997	Hansen
5,675,329	A	10/1997	Barker
5,687,331	A	11/1997	Volk et al.
5,712,995	A	1/1998	Cohn
5,771,042	A	6/1998	Santos-Gomez
5,793,415	A	8/1998	Gregory et al.
5,819,284	A	10/1998	Farber et al.
5,844,547	A	12/1998	Minakuchi et al.
5,847,706	A	12/1998	Kingsley
5,860,073	A	1/1999	Ferrel et al.
5,905,492	A	5/1999	Straub et al.
5,914,720	A	6/1999	Maples et al.
5,940,076	A	8/1999	Sommers et al.
5,959,621	A	9/1999	Nawaz et al.
5,963,204	A	10/1999	Ikeda et al.
6,008,809	A	12/1999	Brooks
6,008,816	A	12/1999	Eisler
6,009,519	A	12/1999	Jones et al.
6,011,542	A	1/2000	Durrani et al.
6,028,600	A	2/2000	Rosin et al.
6,057,839	A	5/2000	Advani et al.
6,064,383	A	5/2000	Skelly
6,104,418	A	8/2000	Tanaka et al.
6,108,003	A	8/2000	Hall, Jr. et al.
6,111,585	A	8/2000	Choi
6,115,040	A	9/2000	Bladow et al.
6,163,749	A	12/2000	McDonough et al.
6,166,736	A	12/2000	Hugh
6,188,405	B1	2/2001	Czerwinski et al.
6,211,921	B1	4/2001	Cherian et al.
6,212,564	B1	4/2001	Harter et al.
6,216,141	B1	4/2001	Straub et al.
6,266,098	B1	7/2001	Cove et al.
6,278,448	B1	8/2001	Brown et al.
6,281,940	B1	8/2001	Sciammarella
6,311,058	B1	10/2001	Wecker et al.
6,313,854	B1	11/2001	Gibson
6,369,837	B1	4/2002	Schirmer
6,385,630	B1	5/2002	Ejerhed
6,396,963	B2	5/2002	Shaffer
6,411,307	B1	6/2002	Rosin et al.
6,424,338	B1	7/2002	Andersone
6,426,753	B1	7/2002	Migdal
6,433,789	B1	8/2002	Rosman
6,448,987	B1	9/2002	Easty et al.
6,449,638	B1	9/2002	Wecker et al.
6,456,334	B1	9/2002	Duhault
6,489,977	B2	12/2002	Sone
6,505,243	B1	1/2003	Lortz
6,507,643	B1	1/2003	Groner
6,510,144	B1	1/2003	Dommety et al.
6,510,466	B1	1/2003	Cox et al.
6,510,553	B1	1/2003	Hazra
6,538,635	B1	3/2003	Ringot
6,570,597	B1	5/2003	Seki et al.
6,577,323	B1	6/2003	Jamieson et al.
6,577,350	B1	6/2003	Proehl et al.
6,591,244	B2	7/2003	Jim et al.
6,597,374	B1	7/2003	Baker et al.
6,628,309	B1	9/2003	Dodson et al.
6,636,246	B1	10/2003	Gallo et al.
6,662,023	B1	12/2003	Helle
6,675,387	B1	1/2004	Boucher et al.
6,690,387	B2	2/2004	Zimmerman et al.
6,697,825	B1	2/2004	Underwood et al.
6,707,449	B2	3/2004	Hinckley et al.
6,710,771	B1	3/2004	Yamaguchi et al.
6,721,958	B1	4/2004	Dureau
6,724,403	B1	4/2004	Santoro et al.
6,784,925	B1	8/2004	Tomat et al.
6,798,421	B2	9/2004	Baldwin
6,801,203	B1	10/2004	Hussain
6,807,558	B1	10/2004	Hassett et al.
6,832,355	B1	12/2004	Duperrouzel et al.
6,857,104	B1	2/2005	Cahn
6,865,297	B2	3/2005	Loui
6,873,329	B2	3/2005	Cohen et al.
6,876,312	B2	4/2005	Yu
6,885,974	B2	4/2005	Holle
6,904,597	B2	6/2005	Jin
6,920,445	B2	7/2005	Bae
6,938,101	B2	8/2005	Hayes et al.
6,961,731	B2	11/2005	Holbrook
6,971,067	B1	11/2005	Karson et al.
6,972,776	B2	12/2005	Davis et al.
6,975,306	B2	12/2005	Hinckley
6,976,210	B1	12/2005	Silva et al.
6,978,303	B1	12/2005	McCreesh et al.
6,983,310	B2	1/2006	Rouse
6,987,991	B2	1/2006	Nelson
7,013,041	B2	3/2006	Miyamoto
7,017,119	B1	3/2006	Johnston et al.
7,019,757	B2	3/2006	Brown et al.
7,028,264	B2	4/2006	Santoro et al.
7,032,187	B2	4/2006	Keely, Jr. et al.
7,036,090	B1	4/2006	Nguyen
7,036,091	B1	4/2006	Nguyen
7,042,460	B2	5/2006	Hussain et al.
7,051,291	B2	5/2006	Sciammarella et al.
7,058,955	B2	6/2006	Porkka
7,065,385	B2	6/2006	Jarrad et al.
7,065,386	B1	6/2006	Smethers
7,075,535	B2	7/2006	Aguera y Arcas
7,089,507	B2	8/2006	Lection et al.
7,091,998	B2	8/2006	Miller-Smith
7,093,201	B2	8/2006	Duarte
7,106,349	B2	9/2006	Baar et al.
7,111,044	B2	9/2006	Lee
7,133,707	B1	11/2006	Rak
7,133,859	B1	11/2006	Wong
7,139,800	B2	11/2006	Bellotti et al.
7,146,573	B2	12/2006	Brown et al.
7,155,729	B1	12/2006	Andrew et al.
7,158,123	B2	1/2007	Myers et al.
7,158,135	B2	1/2007	Santodomingo et al.
7,178,111	B2	2/2007	Glein et al.
7,180,527	B2	2/2007	Sakai et al.
7,194,506	B1	3/2007	White et al.
7,210,099	B2	4/2007	Rohrabaugh et al.
7,216,588	B2	5/2007	Suess
7,249,326	B2	7/2007	Stoakley et al.
7,262,775	B2	8/2007	Calkins et al.
7,263,668	B1	8/2007	Lentz
7,277,924	B1	10/2007	Wichmann et al.
7,280,097	B2	10/2007	Chen
7,283,620	B2	10/2007	Adamczyk
7,289,806	B2	10/2007	Morris et al.

(56) **References Cited**

U.S. PATENT DOCUMENTS

7,296,184 B2 11/2007 Derks et al.
7,296,242 B2 11/2007 Agata et al.
7,310,100 B2 12/2007 Hussain
7,333,092 B2 2/2008 Zadesky et al.
7,333,120 B2 2/2008 Venolia
7,336,263 B2 2/2008 Valikangas
7,369,647 B2 5/2008 Gao et al.
7,376,907 B2 5/2008 Santoro et al.
7,386,807 B2 6/2008 Cummins et al.
7,388,578 B2 6/2008 Tao
7,403,191 B2 7/2008 Sinclair
7,408,538 B2 8/2008 Hinckley et al.
7,409,646 B2 8/2008 Vedbrat et al.
7,412,663 B2 8/2008 Lindsay et al.
7,433,920 B2 10/2008 Blagsvedt et al.
7,447,520 B2 11/2008 Scott
7,461,151 B2 12/2008 Colson et al.
7,469,380 B2 12/2008 Wessling et al.
7,469,381 B2 12/2008 Ording
7,478,326 B2 1/2009 Holecek et al.
7,479,949 B2 1/2009 Jobs
7,480,870 B2 1/2009 Anzures
7,483,418 B2 1/2009 Maurer
7,487,467 B1 2/2009 Kawahara et al.
7,496,830 B2 2/2009 Rubin
7,500,175 B2 3/2009 Colle et al.
7,512,966 B2 3/2009 Lyons, Jr. et al.
7,577,918 B2 8/2009 Lindsay
7,581,034 B2 8/2009 Polivy et al.
7,593,995 B1 9/2009 He et al.
7,595,810 B2 9/2009 Louch
7,599,790 B2 10/2009 Rasmussen et al.
7,600,189 B2 10/2009 Fujisawa
7,600,234 B2 10/2009 Dobrowski et al.
7,606,714 B2 10/2009 Williams et al.
7,607,106 B2 10/2009 Ernst et al.
7,610,563 B2 10/2009 Nelson et al.
7,619,615 B1 11/2009 Donoghue
7,640,518 B2 12/2009 Forlines et al.
7,653,883 B2 1/2010 Hotelling et al.
7,657,849 B2 2/2010 Chaudhri et al.
7,663,607 B2 2/2010 Hotelling et al.
7,664,067 B2 2/2010 Pointer
7,669,140 B2 2/2010 Matthews et al.
7,671,756 B2 3/2010 Herz et al.
7,694,221 B2 4/2010 Fortes
7,702,683 B1 4/2010 Kirshenbaum
7,755,674 B2 7/2010 Kaminaga
7,792,925 B1 9/2010 Werner et al.
7,834,861 B2 11/2010 Lee
7,844,915 B2 11/2010 Platzer et al.
7,877,707 B2 1/2011 Westerman et al.
7,880,728 B2 2/2011 De Los Reyes et al.
7,889,180 B2 2/2011 Byun et al.
7,895,309 B2 2/2011 Belali et al.
7,903,115 B2 3/2011 Platzer et al.
7,924,271 B2 4/2011 Christie et al.
7,933,632 B2 4/2011 Flynt et al.
7,962,281 B2 6/2011 Rasmussen et al.
7,983,718 B1 7/2011 Roka
7,987,431 B2 7/2011 Santoro et al.
8,006,276 B2 8/2011 Nakagawa et al.
8,028,239 B1 9/2011 Al-Hilali et al.
8,065,628 B2 11/2011 Oshiro et al.
8,086,275 B2 12/2011 Wykes
8,108,781 B2 1/2012 Laansoo et al.
8,131,808 B2 3/2012 Aoki et al.
8,150,924 B2 4/2012 Buchheit et al.
8,171,431 B2 5/2012 Grossman et al.
8,175,653 B2 5/2012 Smuga
8,176,438 B2 5/2012 Zaman et al.
8,209,623 B2 6/2012 Barletta et al.
8,225,193 B1 7/2012 Kleinschnitz et al.
8,238,876 B2 8/2012 Teng
8,245,152 B2 8/2012 Brunner et al.
8,250,494 B2 8/2012 Butcher
8,255,473 B2 8/2012 Eren et al.
8,255,812 B1 * 8/2012 Parparita et al. 715/762
8,269,736 B2 9/2012 Wilairat
8,279,241 B2 10/2012 Fong
8,307,279 B1 11/2012 Fioravanti et al.
8,384,726 B1 2/2013 Grabowski et al.
8,429,565 B2 4/2013 Agarawala et al.
8,448,083 B1 5/2013 Migos et al.
8,473,870 B2 6/2013 Hinckley et al.
8,493,510 B2 7/2013 Bryan et al.
8,525,808 B1 9/2013 Buening
8,539,384 B2 9/2013 Hinckley et al.
8,548,431 B2 10/2013 Teng et al.
8,560,959 B2 10/2013 Zaman et al.
8,589,815 B2 11/2013 Fong et al.
8,612,874 B2 12/2013 Zaman et al.
8,627,227 B2 1/2014 Matthews et al.
8,665,272 B2 3/2014 Fitzmaurice et al.
8,669,950 B2 3/2014 Forstall et al.
8,687,023 B2 4/2014 Markiewicz et al.
8,689,123 B2 4/2014 Zaman et al.
8,706,515 B2 4/2014 Cobbs et al.
8,830,270 B2 9/2014 Zaman et al.
8,893,033 B2 11/2014 Donahue et al.
8,922,575 B2 12/2014 Garside et al.
8,933,952 B2 1/2015 Zaman et al.
8,935,631 B2 1/2015 Leonard et al.
8,990,733 B2 3/2015 Deutsch et al.
9,015,606 B2 4/2015 Zaman et al.
9,052,820 B2 6/2015 Jarrett et al.
9,104,307 B2 8/2015 Jarrett et al.
9,104,440 B2 8/2015 Jarrett et al.
9,146,670 B2 9/2015 Zaman et al.
2001/0022621 A1 9/2001 Squibbs
2002/0000963 A1 1/2002 Yoshida et al.
2002/0018051 A1 2/2002 Singh
2002/0026524 A1 2/2002 Dharap
2002/0035607 A1 3/2002 Checkoway
2002/0054117 A1 5/2002 van Dantzich et al.
2002/0060701 A1 5/2002 Naughton et al.
2002/0070961 A1 6/2002 Xu et al.
2002/0077156 A1 6/2002 Smethers
2002/0083025 A1 6/2002 Robarts et al.
2002/0091755 A1 7/2002 Narin
2002/0097264 A1 7/2002 Dutta et al.
2002/0105531 A1 8/2002 Niemi
2002/0115476 A1 8/2002 Padawer et al.
2002/0128036 A1 9/2002 Yach et al.
2002/0129061 A1 9/2002 Swart et al.
2002/0138248 A1 9/2002 Corston-Oliver et al.
2002/0142762 A1 10/2002 Chmaytelli et al.
2002/0145631 A1 10/2002 Arbab et al.
2002/0149622 A1 10/2002 Uesaki et al.
2002/0152305 A1 10/2002 Jackson et al.
2002/0154176 A1 10/2002 Barksdale et al.
2002/0161634 A1 10/2002 Kaars
2002/0165923 A1 11/2002 Prince
2002/0186251 A1 12/2002 Himmel et al.
2002/0194385 A1 12/2002 Linder et al.
2003/0003899 A1 1/2003 Tashiro et al.
2003/0008686 A1 1/2003 Park et al.
2003/0011643 A1 1/2003 Nishihihata
2003/0020671 A1 1/2003 Santoro et al.
2003/0040300 A1 2/2003 Bodic
2003/0046396 A1 3/2003 Richter et al.
2003/0052900 A1 3/2003 Card et al.
2003/0073414 A1 4/2003 Capps
2003/0096604 A1 5/2003 Vollandt
2003/0105827 A1 6/2003 Tan et al.
2003/0135582 A1 7/2003 Allen et al.
2003/0187996 A1 10/2003 Cardina et al.
2003/0222907 A1 12/2003 Heikes et al.
2003/0225846 A1 12/2003 Heikes et al.
2004/0066414 A1 4/2004 Czerwinski et al.
2004/0068543 A1 4/2004 Seifert
2004/0078299 A1 4/2004 Down-Logan
2004/0111673 A1 6/2004 Bowman et al.
2004/0155908 A1 8/2004 Wagner

(56) **References Cited**

U.S. PATENT DOCUMENTS

2004/0185883 A1 9/2004 Rukman
2004/0212586 A1 10/2004 Denny
2004/0217954 A1 11/2004 O'Gorman et al.
2004/0217980 A1 11/2004 Radburn et al.
2004/0237048 A1 11/2004 Tojo et al.
2004/0250217 A1 12/2004 Tojo et al.
2004/0266491 A1 12/2004 Howard et al.
2005/0005241 A1 1/2005 Hunleth et al.
2005/0028208 A1 2/2005 Ellis
2005/0044058 A1 2/2005 Matthews et al.
2005/0050462 A1 3/2005 Whittle et al.
2005/0054384 A1 3/2005 Pasquale et al.
2005/0058353 A1 3/2005 Matsubara
2005/0060647 A1 3/2005 Doan et al.
2005/0060663 A1 3/2005 Arkeketa et al.
2005/0060665 A1 3/2005 Rekimoto
2005/0079896 A1 4/2005 Kokko et al.
2005/0081155 A1 4/2005 Martin et al.
2005/0085215 A1 4/2005 Kokko
2005/0085272 A1 4/2005 Anderson et al.
2005/0108655 A1 5/2005 Andrea et al.
2005/0114788 A1 5/2005 Fabritius
2005/0120306 A1 6/2005 Klassen et al.
2005/0125736 A1 6/2005 Ferri et al.
2005/0143138 A1 6/2005 Lee et al.
2005/0149879 A1 7/2005 Jobs et al.
2005/0156947 A1 7/2005 Sakai et al.
2005/0182798 A1 8/2005 Todd et al.
2005/0183021 A1 8/2005 Allen et al.
2005/0184999 A1 8/2005 Daioku
2005/0198159 A1 9/2005 Kirsch
2005/0198584 A1 9/2005 Matthews et al.
2005/0200762 A1 9/2005 Barletta et al.
2005/0207734 A1 9/2005 Howell et al.
2005/0216300 A1 9/2005 Appelman et al.
2005/0223057 A1 10/2005 Buchheit et al.
2005/0223069 A1 10/2005 Cooperman et al.
2005/0232166 A1 10/2005 Nierhaus
2005/0250547 A1 11/2005 Salman et al.
2005/0268237 A1 12/2005 Crane et al.
2005/0273614 A1 12/2005 Ahuja
2005/0280719 A1 12/2005 Kim
2006/0004685 A1 1/2006 Pyhalammi et al.
2006/0010394 A1 1/2006 Chaudhri et al.
2006/0015736 A1 1/2006 Callas et al.
2006/0015812 A1 1/2006 Cunningham
2006/0026013 A1 2/2006 Kraft
2006/0026521 A1 2/2006 Hotelling et al.
2006/0036425 A1 2/2006 Le Cocq et al.
2006/0048073 A1 3/2006 Jarrett et al.
2006/0048101 A1 3/2006 Krassovsky et al.
2006/0059430 A1 3/2006 Bells
2006/0061597 A1 3/2006 Hui
2006/0070005 A1 3/2006 Gilbert et al.
2006/0074735 A1 4/2006 Shukla et al.
2006/0074771 A1 4/2006 Kim
2006/0075360 A1 4/2006 Bixler
2006/0103623 A1 5/2006 Davis
2006/0107231 A1 5/2006 Matthews et al.
2006/0112354 A1 5/2006 Park et al.
2006/0129543 A1 6/2006 Bates et al.
2006/0135220 A1 6/2006 Kim et al.
2006/0136773 A1 6/2006 Kespohl et al.
2006/0152803 A1 7/2006 Provitola
2006/0156228 A1 7/2006 Gallo et al.
2006/0172724 A1 8/2006 Linkert et al.
2006/0173911 A1 8/2006 Levin et al.
2006/0184901 A1 8/2006 Dietz
2006/0190833 A1 8/2006 SanGiovanni et al.
2006/0199598 A1 9/2006 Lee et al.
2006/0212806 A1 9/2006 Griffin et al.
2006/0218234 A1 9/2006 Deng et al.
2006/0218501 A1 9/2006 Wilson et al.
2006/0224993 A1 10/2006 Wong et al.
2006/0227153 A1 10/2006 Anwar et al.
2006/0236264 A1 10/2006 Cain et al.
2006/0246955 A1 11/2006 Nirhamo
2006/0253685 A1 11/2006 Wong et al.
2006/0253801 A1 11/2006 Okaro et al.
2006/0259870 A1 11/2006 Hewitt et al.
2006/0259873 A1 11/2006 Mister
2006/0262134 A1 11/2006 Hamiter et al.
2006/0268100 A1 11/2006 Karukka et al.
2006/0271520 A1 11/2006 Ragan
2006/0281448 A1 12/2006 Plestid et al.
2006/0293088 A1 12/2006 Kokubo
2006/0294063 A1 12/2006 Ali et al.
2006/0294396 A1 12/2006 Witman
2007/0005716 A1 1/2007 LaVasseur et al.
2007/0006094 A1 1/2007 Canfield et al.
2007/0011610 A1 1/2007 Sethi et al.
2007/0015532 A1 1/2007 Deelman
2007/0024646 A1 2/2007 Saarinen
2007/0028267 A1 2/2007 Ostojic et al.
2007/0035513 A1 2/2007 Sherrard et al.
2007/0038567 A1 2/2007 Allaire et al.
2007/0050724 A1 3/2007 Lee et al.
2007/0054679 A1 3/2007 Cho et al.
2007/0055770 A1 3/2007 Karmakar et al.
2007/0061488 A1 3/2007 Alagappan et al.
2007/0061714 A1 3/2007 Stuple et al.
2007/0063995 A1 3/2007 Bailey et al.
2007/0067272 A1 3/2007 Flynt
2007/0067737 A1 3/2007 Zielinski et al.
2007/0073718 A1 3/2007 Ramer
2007/0076013 A1 4/2007 Campbell
2007/0080954 A1 4/2007 Griffin
2007/0082707 A1 4/2007 Flynt et al.
2007/0082708 A1 4/2007 Griffin
2007/0083746 A1 4/2007 Fallon et al.
2007/0083821 A1 4/2007 Garbow et al.
2007/0094045 A1 4/2007 Cobbs et al.
2007/0106635 A1 5/2007 Frieden et al.
2007/0120835 A1 5/2007 Sato
2007/0127638 A1 6/2007 Doulton
2007/0143705 A1 6/2007 Peters
2007/0157089 A1 7/2007 Van Os et al.
2007/0157105 A1 7/2007 Owens et al.
2007/0171192 A1 7/2007 Seo et al.
2007/0180381 A1 8/2007 Rice
2007/0182595 A1 8/2007 Ghasabian
2007/0182999 A1 8/2007 Anthony et al.
2007/0185847 A1 8/2007 Budzik et al.
2007/0192707 A1 8/2007 Maeda et al.
2007/0192726 A1 8/2007 Kim et al.
2007/0192730 A1 8/2007 Simila et al.
2007/0192733 A1 8/2007 Horiuchi
2007/0192739 A1 8/2007 Hunleth et al.
2007/0197196 A1 8/2007 Shenfield et al.
2007/0198420 A1 8/2007 Goldstein
2007/0208840 A1 9/2007 Mcconville et al.
2007/0211034 A1 9/2007 Griffin et al.
2007/0214429 A1 9/2007 Lyudovyk et al.
2007/0216651 A1 9/2007 Patel
2007/0216661 A1 9/2007 Chen et al.
2007/0222769 A1 9/2007 Otsuka et al.
2007/0225022 A1 9/2007 Satake
2007/0233654 A1 10/2007 Karlson
2007/0236468 A1 10/2007 Tuli
2007/0238488 A1 10/2007 Scott
2007/0247435 A1 10/2007 Benko et al.
2007/0250583 A1 10/2007 Hardy
2007/0250787 A1 10/2007 Kawahara et al.
2007/0253758 A1 11/2007 Suess
2007/0256029 A1 11/2007 Maxwell
2007/0257891 A1 11/2007 Esenther et al.
2007/0257933 A1 11/2007 Klassen
2007/0260674 A1 11/2007 Shenfield
2007/0262964 A1 11/2007 Zotov et al.
2007/0263843 A1 11/2007 Foxenland
2007/0273663 A1 11/2007 Park et al.
2007/0273668 A1 11/2007 Park et al.
2007/0280457 A1 12/2007 Aberethy
2007/0281747 A1 12/2007 Pletikosa

(56) **References Cited**

U.S. PATENT DOCUMENTS

2008/0005668 A1 1/2008 Mavinkurve
2008/0028294 A1 1/2008 Sell et al.
2008/0032681 A1 2/2008 West
2008/0036743 A1 2/2008 Westerman
2008/0040692 A1 2/2008 Sunday et al.
2008/0048986 A1 2/2008 Khoo
2008/0052370 A1 2/2008 Snyder
2008/0057910 A1 3/2008 Thoresson et al.
2008/0057926 A1 3/2008 Forstall et al.
2008/0065607 A1 3/2008 Weber
2008/0072173 A1 3/2008 Brunner et al.
2008/0076472 A1 3/2008 Hyatt
2008/0082911 A1 4/2008 Sorotokin et al.
2008/0082934 A1 4/2008 Kocienda et al.
2008/0085700 A1 4/2008 Arora
2008/0092054 A1 4/2008 Bhumkar et al.
2008/0094368 A1 4/2008 Ording et al.
2008/0095100 A1 4/2008 Cleveland et al.
2008/0102863 A1 5/2008 Hardy
2008/0104544 A1 5/2008 Collins et al.
2008/0107057 A1 5/2008 Kannan et al.
2008/0113656 A1 5/2008 Lee et al.
2008/0114535 A1 5/2008 Nesbitt
2008/0122796 A1 5/2008 Jobs
2008/0132252 A1 6/2008 Altman et al.
2008/0138030 A1 6/2008 Bryan et al.
2008/0141153 A1 6/2008 Samson et al.
2008/0153551 A1 6/2008 Baek et al.
2008/0155425 A1 6/2008 Murthy et al.
2008/0158189 A1 7/2008 Kim
2008/0162651 A1 7/2008 Madnani
2008/0163104 A1 7/2008 Haug
2008/0165132 A1 7/2008 Weiss
2008/0165136 A1 7/2008 Christie et al.
2008/0165141 A1 7/2008 Christie
2008/0165163 A1 7/2008 Bathiche
2008/0165210 A1 7/2008 Platzer et al.
2008/0167058 A1 7/2008 Lee et al.
2008/0168349 A1 7/2008 Lamiraux et al.
2008/0168379 A1 7/2008 Forstall et al.
2008/0168382 A1 7/2008 Louch et al.
2008/0168402 A1 7/2008 Blumenberg
2008/0168403 A1 7/2008 Westerman et al.
2008/0172609 A1 7/2008 Rytivaara
2008/0174570 A1 7/2008 Jobs et al.
2008/0180399 A1 7/2008 Cheng
2008/0182628 A1 7/2008 Lee et al.
2008/0184112 A1 7/2008 Chiang et al.
2008/0189653 A1 8/2008 Taylor et al.
2008/0189658 A1 8/2008 Jeong et al.
2008/0192056 A1 8/2008 Robertson et al.
2008/0198141 A1 8/2008 Lee et al.
2008/0200142 A1 8/2008 Adbel-Kader et al.
2008/0208973 A1 8/2008 Hayashi
2008/0222273 A1 9/2008 Lakshmanan
2008/0222545 A1 9/2008 Lemay et al.
2008/0222547 A1 9/2008 Wong et al.
2008/0222560 A1 9/2008 Harrison
2008/0222569 A1 9/2008 Champion
2008/0225014 A1 9/2008 Kim
2008/0242362 A1 10/2008 Duarte
2008/0259042 A1 10/2008 Thorn
2008/0261513 A1 10/2008 Shin et al.
2008/0261660 A1 10/2008 Huh et al.
2008/0263457 A1 10/2008 Kim et al.
2008/0270558 A1 10/2008 Ma
2008/0284798 A1 11/2008 Weybrew et al.
2008/0297475 A1 12/2008 Woolf et al.
2008/0299999 A1 12/2008 Lockhart et al.
2008/0301046 A1 12/2008 Martinez
2008/0301575 A1 12/2008 Fermon
2008/0307351 A1 12/2008 Louch et al.
2008/0309626 A1 12/2008 Westerman et al.
2008/0313540 A1 12/2008 Dirks et al.
2008/0316177 A1 12/2008 Tseng
2008/0317240 A1 12/2008 Chang et al.
2008/0320413 A1 12/2008 Oshiro
2009/0007009 A1 1/2009 Luneau et al.
2009/0007017 A1 1/2009 Anzures et al.
2009/0012952 A1 1/2009 Fredriksson
2009/0029736 A1 1/2009 Kim et al.
2009/0031243 A1 1/2009 Kano et al.
2009/0031247 A1 1/2009 Walter et al.
2009/0037469 A1 2/2009 Kirsch
2009/0037846 A1 2/2009 Spalink et al.
2009/0051671 A1 2/2009 Konstas
2009/0058821 A1 3/2009 Chaudhri
2009/0061837 A1 3/2009 Chaudhri et al.
2009/0061948 A1 3/2009 Lee et al.
2009/0064055 A1 3/2009 Chaudhri
2009/0070673 A1 3/2009 Barkan et al.
2009/0077649 A1 3/2009 Lockhart
2009/0079740 A1 3/2009 Fitzmaurice et al.
2009/0083656 A1 3/2009 Dokhon
2009/0085851 A1 4/2009 Lim
2009/0085878 A1 4/2009 Heubel
2009/0089215 A1 4/2009 Newton
2009/0089459 A1 4/2009 Jeyaseelan et al.
2009/0089704 A1 4/2009 Makela
2009/0094562 A1 4/2009 Jeong et al.
2009/0103515 A1 4/2009 Pointer
2009/0106696 A1 4/2009 Duarte
2009/0109243 A1 4/2009 Kraft
2009/0117942 A1 5/2009 Boningue et al.
2009/0125844 A1 5/2009 Weir et al.
2009/0140061 A1 6/2009 Schultz et al.
2009/0140986 A1 6/2009 Karkkainen et al.
2009/0144642 A1 6/2009 Crystal
2009/0144652 A1 6/2009 Wiley
2009/0144653 A1 6/2009 Ubillos
2009/0144753 A1 6/2009 Morris
2009/0146962 A1 6/2009 Ahonen et al.
2009/0150618 A1 6/2009 Allen, Jr. et al.
2009/0153492 A1 6/2009 Popp
2009/0160809 A1 6/2009 Yang
2009/0163182 A1 6/2009 Gatti et al.
2009/0164888 A1 6/2009 Phan
2009/0164928 A1 6/2009 Brown et al.
2009/0164936 A1 6/2009 Kawaguchi
2009/0171920 A1 7/2009 Wade et al.
2009/0178007 A1 7/2009 Matas et al.
2009/0182788 A1 7/2009 Chung et al.
2009/0184939 A1 7/2009 Wohlstadter et al.
2009/0189868 A1 7/2009 Joo et al.
2009/0192942 A1 7/2009 Cottrille et al.
2009/0193358 A1 7/2009 Mernyk et al.
2009/0199122 A1 8/2009 Deutsch et al.
2009/0199128 A1 8/2009 Matthews et al.
2009/0199130 A1 8/2009 Tsern et al.
2009/0205041 A1 8/2009 Michalske
2009/0215504 A1 8/2009 Lando
2009/0225038 A1 9/2009 Bolsinga et al.
2009/0228825 A1 9/2009 Van Os et al.
2009/0228841 A1 9/2009 Hildreth
2009/0235200 A1 9/2009 Deutsch et al.
2009/0235203 A1 9/2009 Iizuka
2009/0248421 A1 10/2009 Michaelis et al.
2009/0249257 A1 10/2009 Bove et al.
2009/0265662 A1 10/2009 Bamford
2009/0271778 A1 10/2009 Mandyam et al.
2009/0284482 A1 11/2009 Chin
2009/0284657 A1 11/2009 Roberts et al.
2009/0288044 A1 11/2009 Matthews et al.
2009/0292989 A1 11/2009 Matthews et al.
2009/0293007 A1 11/2009 Duarte et al.
2009/0293013 A1 11/2009 O'Shaugnessy et al.
2009/0298547 A1 12/2009 Kim et al.
2009/0303231 A1 12/2009 Robinet et al.
2009/0305732 A1 12/2009 Marcellino et al.
2009/0307105 A1 12/2009 Lemay et al.
2009/0307589 A1 12/2009 Inose et al.
2009/0307623 A1 12/2009 Agarawala et al.
2009/0313584 A1 12/2009 Kerr et al.
2009/0315839 A1 12/2009 Wilson et al.

(56) **References Cited**

U.S. PATENT DOCUMENTS

2009/0315847 A1 12/2009 Fujii
2009/0318171 A1 12/2009 Backholm et al.
2009/0322760 A1 12/2009 Kwiatkowski
2009/0327969 A1 12/2009 Estrada
2010/0008490 A1 1/2010 Gharachorloo et al.
2010/0010934 A1 1/2010 Barry et al.
2010/0013782 A1 1/2010 Liu et al.
2010/0020025 A1 1/2010 Lemort et al.
2010/0020091 A1 1/2010 Rasmussen et al.
2010/0031186 A1 2/2010 Tseng
2010/0042911 A1 2/2010 Wormald et al.
2010/0050076 A1 2/2010 Roth
2010/0057566 A1 3/2010 Itzhak
2010/0058248 A1 3/2010 Park
2010/0062811 A1 3/2010 Park et al.
2010/0066698 A1 3/2010 Seo
2010/0070931 A1 3/2010 Nichols
2010/0073380 A1 3/2010 Kaplan et al.
2010/0075628 A1 3/2010 Ye
2010/0077058 A1 3/2010 Messer
2010/0077310 A1 3/2010 Karachale et al.
2010/0077330 A1 3/2010 Kaplan et al.
2010/0079392 A1 4/2010 Chiang et al.
2010/0079413 A1 4/2010 Kawashima et al.
2010/0081475 A1 4/2010 Chiang et al.
2010/0086022 A1 4/2010 Hunleth et al.
2010/0087169 A1 4/2010 Lin
2010/0087173 A1 4/2010 Lin
2010/0088635 A1 4/2010 Louch
2010/0088641 A1 4/2010 Choi
2010/0100839 A1 4/2010 Tseng et al.
2010/0102998 A1 4/2010 Fux
2010/0103118 A1 4/2010 Townsend et al.
2010/0103124 A1 4/2010 Kruzeniski
2010/0105370 A1 4/2010 Kruzeniski
2010/0105424 A1 4/2010 Smuga
2010/0105438 A1 4/2010 Wykes
2010/0105439 A1 4/2010 Friedman
2010/0105440 A1 4/2010 Kruzeniski
2010/0105441 A1 4/2010 Voss
2010/0106915 A1 4/2010 Krishnaprasad et al.
2010/0107067 A1 4/2010 Vaisanen
2010/0107068 A1 4/2010 Butcher
2010/0107100 A1 4/2010 Schneekloth
2010/0122110 A1 5/2010 Ordogh
2010/0123737 A1 5/2010 Williamson et al.
2010/0131901 A1 5/2010 Takahashi et al.
2010/0138767 A1 6/2010 Wang et al.
2010/0145675 A1 6/2010 Lloyd et al.
2010/0146384 A1 6/2010 Peev et al.
2010/0146437 A1 6/2010 Woodcock et al.
2010/0159966 A1 6/2010 Friedman
2010/0159994 A1 6/2010 Stallings et al.
2010/0159995 A1 6/2010 Stallings et al.
2010/0162180 A1 6/2010 Dunnam et al.
2010/0167699 A1 7/2010 Sigmund et al.
2010/0169766 A1 7/2010 Duarte et al.
2010/0169772 A1 7/2010 Stallings et al.
2010/0169819 A1 7/2010 Bestle et al.
2010/0175018 A1 7/2010 Petschnigg et al.
2010/0175029 A1 7/2010 Williams
2010/0180233 A1 7/2010 Kruzeniski
2010/0185932 A1 7/2010 Coffman et al.
2010/0216491 A1 8/2010 Winkler et al.
2010/0223569 A1 9/2010 Vuong et al.
2010/0248688 A1 9/2010 Teng
2010/0248689 A1 9/2010 Teng
2010/0248741 A1 9/2010 Setlur et al.
2010/0248787 A1 9/2010 Smuga
2010/0248788 A1 9/2010 Yook et al.
2010/0251153 A1 9/2010 SanGiovanni et al.
2010/0251167 A1 9/2010 Deluca et al.
2010/0265196 A1 10/2010 Lee et al.
2010/0281402 A1 11/2010 Staikos et al.
2010/0281409 A1 11/2010 Rainisto et al.
2010/0283743 A1 11/2010 Coddington et al.
2010/0289806 A1 11/2010 Lao et al.
2010/0293056 A1 11/2010 Flynt et al.
2010/0293501 A1 11/2010 Russ et al.
2010/0295795 A1 11/2010 Wilairat
2010/0298034 A1 11/2010 Shin et al.
2010/0302172 A1 12/2010 Wilairat
2010/0302176 A1 12/2010 Nikula et al.
2010/0302278 A1 12/2010 Shaffer et al.
2010/0302712 A1 12/2010 Wilairat
2010/0311470 A1 12/2010 Seo et al.
2010/0313165 A1 12/2010 Louch et al.
2010/0321403 A1 12/2010 Inadome
2010/0328431 A1 12/2010 Kim et al.
2010/0329642 A1 12/2010 Kam et al.
2010/0333008 A1 12/2010 Taylor
2011/0004839 A1 1/2011 Cha et al.
2011/0004845 A1 1/2011 Ciabarra
2011/0018806 A1 1/2011 Yano
2011/0029598 A1 2/2011 Arnold et al.
2011/0029904 A1 2/2011 Smith et al.
2011/0029927 A1 2/2011 Lietzke et al.
2011/0029934 A1 2/2011 Locker et al.
2011/0032365 A1 2/2011 Yett
2011/0035702 A1 2/2011 Williams et al.
2011/0043527 A1 2/2011 Ording et al.
2011/0055773 A1 3/2011 Agarawala et al.
2011/0074699 A1 3/2011 Marr et al.
2011/0074710 A1 3/2011 Weeldreyer et al.
2011/0074719 A1 3/2011 Yeh et al.
2011/0087988 A1 4/2011 Ray et al.
2011/0093778 A1 4/2011 Kim et al.
2011/0093815 A1 4/2011 Gobeil
2011/0093816 A1 4/2011 Chang et al.
2011/0093821 A1 4/2011 Wigdor et al.
2011/0107272 A1 5/2011 Aguilar
2011/0113337 A1 5/2011 Liu et al.
2011/0113486 A1 5/2011 Hunt et al.
2011/0119586 A1 5/2011 Blinnikka et al.
2011/0126156 A1 5/2011 Krishnaraj et al.
2011/0138313 A1 6/2011 Decker et al.
2011/0154235 A1 6/2011 Min et al.
2011/0157027 A1 6/2011 Rissa
2011/0161845 A1 6/2011 Stallings et al.
2011/0163968 A1 7/2011 Hogan
2011/0167403 A1 7/2011 French et al.
2011/0173556 A1 7/2011 Czerwinski et al.
2011/0173568 A1 7/2011 Royal, Jr. et al.
2011/0173569 A1 7/2011 Howes et al.
2011/0175930 A1 7/2011 Hwang et al.
2011/0181617 A1 7/2011 Tsuda et al.
2011/0202837 A1 8/2011 Fong et al.
2011/0202866 A1 8/2011 Huang et al.
2011/0209039 A1 8/2011 Hinckley et al.
2011/0209089 A1 8/2011 Hinckley et al.
2011/0209100 A1 8/2011 Hinckley et al.
2011/0209101 A1 8/2011 Hinckley et al.
2011/0209102 A1 8/2011 Hinckley et al.
2011/0209103 A1 8/2011 Hinckley et al.
2011/0209104 A1 8/2011 Hinckley et al.
2011/0225547 A1 9/2011 Fong et al.
2011/0231796 A1 9/2011 Vigil
2011/0252346 A1 10/2011 Chaudhri
2011/0252380 A1 10/2011 Chaudhri
2011/0258563 A1 10/2011 Lincke
2011/0276864 A1 11/2011 Oules
2011/0283188 A1 11/2011 Farrenkopf et al.
2011/0316884 A1 12/2011 Giambalvo et al.
2012/0005584 A1 1/2012 Seago et al.
2012/0009903 A1 1/2012 Schultz et al.
2012/0017162 A1 1/2012 Khokhlov
2012/0028687 A1 2/2012 Wykes
2012/0050185 A1 3/2012 Davydov et al.
2012/0050332 A1 3/2012 Nikara et al.
2012/0081310 A1 4/2012 Schrock
2012/0089950 A1 4/2012 Tseng
2012/0102433 A1 4/2012 Falkenburg
2012/0151397 A1 6/2012 Oberstein et al.
2012/0159395 A1 6/2012 Deutsch et al.

(56) **References Cited**

U.S. PATENT DOCUMENTS

2012/0159402	A1	6/2012	Nurmi et al.
2012/0162266	A1	6/2012	Douglas et al.
2012/0167008	A1	6/2012	Zaman
2012/0167011	A1	6/2012	Zaman
2012/0169593	A1	7/2012	Mak et al.
2012/0174005	A1	7/2012	Deutsch
2012/0174029	A1	7/2012	Bastide et al.
2012/0174034	A1	7/2012	Chae et al.
2012/0176401	A1	7/2012	Hayward et al.
2012/0179992	A1	7/2012	Smuga
2012/0210265	A1	8/2012	Delia et al.
2012/0212495	A1	8/2012	Butcher
2012/0216139	A1	8/2012	Ording et al.
2012/0226971	A1	9/2012	Tocchini et al.
2012/0233571	A1	9/2012	Wever et al.
2012/0244841	A1	9/2012	Teng
2012/0254780	A1	10/2012	Mouton et al.
2012/0265644	A1	10/2012	Roa et al.
2012/0290962	A1	11/2012	Zielinski et al.
2012/0299968	A1	11/2012	Wong et al.
2012/0304068	A1	11/2012	Zaman et al.
2012/0304092	A1	11/2012	Jarrett et al.
2012/0304108	A1	11/2012	Jarrett et al.
2012/0304113	A1	11/2012	Patten et al.
2012/0304114	A1	11/2012	Wong et al.
2012/0304116	A1	11/2012	Donahue et al.
2012/0304117	A1	11/2012	Donahue et al.
2012/0304118	A1	11/2012	Donahue et al.
2012/0311485	A1	12/2012	Caliendo, Jr. et al.
2012/0323992	A1	12/2012	Brobst et al.
2013/0031508	A1	1/2013	Kodosky et al.
2013/0033525	A1	2/2013	Markiewicz
2013/0042203	A1	2/2013	Wong et al.
2013/0042206	A1	2/2013	Zaman et al.
2013/0044141	A1	2/2013	Markiewicz
2013/0047079	A1	2/2013	Kroeger et al.
2013/0047105	A1	2/2013	Jarrett
2013/0047117	A1	2/2013	Deutsch
2013/0057587	A1	3/2013	Leonard et al.
2013/0057588	A1	3/2013	Leonard
2013/0063442	A1	3/2013	Zaman
2013/0063443	A1	3/2013	Garside
2013/0063465	A1	3/2013	Zaman
2013/0063490	A1	3/2013	Zaman
2013/0067381	A1	3/2013	Yalovsky
2013/0067390	A1	3/2013	Kwiatkowski
2013/0067391	A1	3/2013	Pittappilly
2013/0067398	A1	3/2013	Pittappilly
2013/0067399	A1	3/2013	Elliott
2013/0067412	A1	3/2013	Leonard
2013/0067420	A1	3/2013	Pittappilly
2013/0093757	A1	4/2013	Cornell
2014/0033099	A1	1/2014	Treitman et al.
2014/0082552	A1	3/2014	Zaman
2014/0098108	A1	4/2014	Fong et al.
2014/0359721	A1	12/2014	Alphin et al.
2015/0046829	A1	2/2015	Donahue et al.
2015/0058763	A1	2/2015	Leonard et al.
2015/0113476	A1	4/2015	Deutsch et al.
2015/0186376	A1	7/2015	Garside et al.
2015/0193403	A1	7/2015	Zaman et al.

FOREIGN PATENT DOCUMENTS

CN	1902575	1/2007
CN	1904823	1/2007
CN	1930568	3/2007
CN	101036104	9/2007
CN	101114303	1/2008
CN	101578577	11/2009
CN	101809531	8/2010
CN	102004603	4/2011
CN	102033710	4/2011
CN	102144213	8/2011
CN	102197702	9/2011
CN	102460370	5/2012
EP	0583060	2/1994
EP	1752868	2/2007
EP	1939718	7/2008
EP	2172836	4/2009
EP	2262193	12/2010
GB	2350991	12/2000
JP	2004227393	8/2004
JP	2004357257	12/2004
KR	200303655	2/2003
KR	20060019198	3/2006
KR	1020070036114	4/2007
KR	1020070098337	10/2007
KR	20070120368	12/2007
KR	1020080025951	3/2008
KR	1020080041809	5/2008
KR	1020080076390	8/2008
KR	100854333	9/2008
KR	1020080084156	9/2008
KR	1020080113913	12/2008
KR	1020090041635	4/2009
KR	20100010072	2/2010
KR	20100048375	5/2010
KR	20100056369	5/2010
KR	1020100056369	5/2010
TW	201023026	6/2010
WO	WO-9926127	5/1999
WO	WO-0129976	4/2001
WO	WO-2005026931	3/2005
WO	WO-2005027506	3/2005
WO	WO-2006019639	2/2006
WO	WO-2007121557	11/2007
WO	WO-2007134623	11/2007
WO	WO-2008030608	3/2008
WO	WO-2008031871	3/2008
WO	WO-2008035831	3/2008
WO	WO-2009000043	12/2008
WO	WO-2009012398	1/2009
WO	WO-2009049331	4/2009
WO	WO-2010024969	3/2010
WO	WO-2010048229	4/2010
WO	WO-2010048448	4/2010
WO	WO-2010048519	4/2010
WO	WO-2010117643	10/2010
WO	WO-2010119356	10/2010
WO	WO-2010125451	11/2010
WO	WO-2010135155	11/2010
WO	WO-2011041885	4/2011

OTHER PUBLICATIONS

"Foreign Office Action", CN Application No. 201110429183.5, Jan. 6, 2014, 10 Pages.

"Foreign Office Action", CN Application No. 201110437542.1, Jan. 6, 2014, 10 Pages.

"Foreign Office Action", CN Application No. 201110437572.2, Dec. 3, 2013, 7 pages.

"Foreign Office Action", CN Application No. 201110454251.3, Dec. 27, 2013, 12 Pages.

"International Search Report and Written Opinion", Application No. PCT/US2013/061066, Feb. 4, 2014, 17 pages.

"Non-Final Office Action", U.S. Appl. No. 13/228,888, Feb. 10, 2014, 21 pages.

"Non-Final Office Action", U.S. Appl. No. 13/229,556, Mar. 28, 2014, 12 pages.

"Restriction Requirement", U.S. Appl. No. 13/118,265, Feb. 27, 2014, 7 pages.

"Restriction Requirement", U.S. Appl. No. 13/118,288, Mar. 4, 2014, 7 pages.

"Supplemental Notice of Allowance", U.S. Appl. No. 12/978,184, Feb. 25, 2014, 2 pages.

"Final Office Action", U.S. Appl. No. 13/345,383, Jul. 25, 2014, 26 pages.

"Foreign Office Action", CN Application No. 201110429183.5, Aug. 21, 2014, 13 Pages.

(56) **References Cited**

OTHER PUBLICATIONS

"Foreign Office Action", CN Application No. 201210317470.1, Jun. 5, 2014, 12 pages.
"Foreign Office Action", CN Application No. 201210331686.3, Jun. 13, 2014, 13 pages.
"Non-Final Office Action", U.S. Appl. No. 12/983,106, Sep. 10, 2014, 19 pages.
"Notice of Allowance", U.S. Appl. No. 13/229,556, Sep. 2, 2014, 12 pages.
"Notice of Allowance", U.S. Appl. No. 13/229,709, Sep. 2, 2014, 4 pages.
"Notice of Allowance", U.S. Appl. No. 13/656,574, Sep. 23, 2014, 7 pages.
"Supplemental Notice of Allowance", U.S. Appl. No. 13/118,204, Sep. 10, 2014, 2 pages.
"Final Office Action", U.S. Appl. No. 13/118,333, Apr. 23, 2014, 22 pages.
"Final Office Action", U.S. Appl. No. 13/228,707, May 21, 2014, 16 pages.
"Final Office Action", U.S. Appl. No. 13/229,155, Jun. 12, 2014, 15 pages.
"Gestures Programming", Retrieved from <http://doc.qt.digia.com/4.6/gestures-overview.html> on May 28, 2014, 2010, 3 pages.
"Image Gestures Example", Retrieved from <http://doc.qt.digia.com/4.6/gestures-imagegestures.html> on May 28, 2014, 2010, 3 pages.
"Non-Final Office Action", U.S. Appl. No. 13/118,265, Jun. 10, 2014, 13 pages.
"Non-Final Office Action", U.S. Appl. No. 13/118,292, Jun. 6, 2014, 25 pages.
"Non-Final Office Action", U.S. Appl. No. 13/228,931, Apr. 7, 2014, 21 pages.
"Non-Final Office Action", U.S. Appl. No. 13/228,945, Apr. 14, 2014, 22 pages.
"Non-Final Office Action", U.S. Appl. No. 13/229,709, Apr. 7, 2014, 12 pages.
"Normalizing Text: A Java Tutorial by Oracle", Retrieved from: <http://docs.oracle.com/javase/tutorial/i18n/text/normalizerapi.html> on Apr. 8, 2014, Nov. 11, 2006, 3 pages.
"Notice of Allowance", U.S. Appl. No. 13/655,386, Apr. 25, 2014, 6 pages.
"QPinchGesture Class Reference", Retrieved from <http://doc.qt.digia.com/4.6/qpinchgesture.html> on May 28, 2014, 2010, 6 pages.
Anson, "Pining for Windows Phone 7 controls? We got ya covered! [Announcing the first release of the Silverlight for Windows Phone Toolkit!]", Retrieved from <http://blogs.msdn.com/b/delay/archive/2010/09/16/pining-for-windows-phone-7-controls-we-got-ya-covered-announcing-the-first-release-of-the-silverlight-for-windows-phone-toolkit.aspx> on May 30, 2014, Sep. 16, 2010, 17 pages.
"Push Notifications Overview for Windows Phone", Retrieved from: <http://msdn.microsoft.com/en-us/library/ff402558%28VS.92%29.aspx> on Sep. 30, 2010, Sep. 3, 2010, 1 page.
"Blackberry office tools: Qwerty Convert", Retrieved from: <http://blackberrysoftwarelist.net/blackberry/download-software/blackberry-office/qwerty_convert.aspx> on Nov. 20, 2008, 1 page.
"Dial a number", Retrieved from: <http://www.phonespell.org/ialhelp.html> on Nov. 20, 2008, 1 page.
"Non-Final Office Action", U.S. Appl. No. 13/196,272, Feb. 6, 2013, 10 pages.
"Non-Final Office Action", U.S. Appl. No. 13/656,354, Feb. 6, 2013, 10 pages.
"Final Office Action", U.S. Appl. No. 11/305,789, Apr. 1, 2009, 10 pages.
"PCT Search Report and Written Opinion", Application No. PCT/US2010/028555, Oct. 12, 2010, 10 pages.
"Notice of Allowance", U.S. Appl. No. 12/484,799, Oct. 22, 2012, 10 pages.
"PCT Search Report and Written Opinion", Application No. PCT/US2010/028699, Oct. 4, 2010, 10 pages.
"PCT Search Report and Written Opinion", Application No. PCT/US2011/067075, Dec. 12, 2012, 10 pages.
"moGo beta v.0.4", Retrieved from: <http://forum.xda-developers.com/showthread.php?t=375196> on Sep. 27, 2010, Mar. 7, 2008, 10 pages.
"Final Office Action", U.S. Appl. No. 12/721,422, Mar. 7, 2013, 10 pages.
"PCT Search Report", Application Serial No. PCT/US2009/061864, May 14, 2010, 10 pages.
"PCT Search Report and Written Opinion", Application No. PCT/US2009/061382, May 26, 2010, 10 pages.
"HTC Shows HTC Snap with Snappy Email Feature", Retrieved from: <http://www.wirelessandmobilenews.com/smartphones/ on May 5, 2009>, May 4, 2009, 10 Pages.
"Non-Final Office Action", U.S. Appl. No. 12/433,605, Jun. 24, 2011, 10 pages.
"PCT Search Report and Written Opinion", Application No. PCT/US2011/055725, Sep. 27, 2012, 10 pages.
"Oracle8i Concepts Release 8.1.5", Retrieved from: http://www.cs.umbc.edu/help/oracle8/server.815/a67781/c16queue.htm on May 6, 2009., Feb. 1999, 10 Pages.
"GnomeCanvas", Retrieved from: <http://library.gnome.org/devel/libgnomecanvas/unstable/GnomeCanvas.html> on Sep. 28, 2010, 11 pages.
"Final Office Action", U.S. Appl. No. 12/433,605, Feb. 3, 2012, 11 pages.
"PCT Search Report and Written Opinion", Application No. PCT/US2009/061735, Jun. 7, 2010, 11 pages.
"Apple iPhone—8GB AT&T", Retrieved from: <http://nytimes.com.com/smartphones/apple-iphone-8gb-at/4515-6452_7-32309245.html> on Nov. 20, 2008, Jun. 29, 2007, 11 pages.
"IntelliScreen—New iPhone App Shows Today Screen Type Info in Lock Screen", Retrieved from: <http://justanotheriphoneblog.com/wordpress//2008/05/13/intelliscreen-new-iphone-app-shows-today-screen-type-info-on-lock-screen/> on Nov. 12, 2008, May 13, 2008, 11 pages.
"Non-Final Office Action", U.S. Appl. No. 13/228,707, Oct. 25, 2013, 12 pages.
"Non-Final Office Action", U.S. Appl. No. 13/655,390, Dec. 17, 2012, 12 pages.
"PCT Search Report and Written Opinion", Application No. PCT/US2010/034772, Dec. 29, 2010, 12 pages.
"Final Office Action", U.S. Appl. No. 13/657,646, May 6, 2013, 12 pages.
"Non-Final Office Action", U.S. Appl. No. 12/484,799, Aug. 11, 2011, 12 pages.
"Class ScrollView", Retrieved from: <http://www.blackberry.com/developers/docs/6.0.0api/net/rim/device/api/ui/ScrollView.html> on Sep. 28, 2010, 13 pages.
"Non-Final Office Action", U.S. Appl. No. 13/118,204, Feb. 28, 2013, 13 pages.
"Non-Final Office Action", U.S. Appl. No. 13/657,646, Jan. 3, 2013, 13 pages.
"Final Office Action", U.S. Appl. No. 12/484,799, Apr. 30, 2012, 13 pages.
"Non-Final Office Action", U.S. Appl. No. 12/469,419, May 23, 2012, 13 pages.
"Non-Final Office Action", U.S. Appl. No. 13/073,300, Jul. 25, 2013, 13 pages.
"Non-Final Office Action", U.S. Appl. No. 12/484,799, Aug. 7, 2012, 13 pages.
"Non-Final Office Action", U.S. Appl. No. 13/118,347, Feb. 12, 2013, 14 pages.
"Final Office Action", U.S. Appl. No. 13/656,354, Jun. 17, 2013, 14 pages.
"Non-Final Office Action", U.S. Appl. No. 13/229,155, Nov. 18, 2013, 14 pages.
"Non-Final Office Action", U.S. Appl. No. 13/228,876, Nov. 22, 2013, 14 pages.
"Exclusive: Windows Mobile 7 to Focus on Touch and Motion Gestures", Retrieved from: <http://anti-linux.blogspot.com/2008/08/exclusive-windows-mobile-7-to-focus-on.html> on May 6, 2009, Aug. 1, 2008, 14 pages.

(56) **References Cited**

OTHER PUBLICATIONS

"Non-Final Office Action", U.S. Appl. No. 11/502,264, Sep. 14, 2012, 14 pages.
"Non-Final Office Action", U.S. Appl. No. 12/469,458, Sep. 21, 2012, 14 pages.
"Non-Final Office Action", U.S. Appl. No. 12/469,480, Sep. 22, 2011, 14 pages.
"Final Office Action", U.S. Appl. No. 11/502,264, Feb. 4, 2010, 15 pages.
"Non-Final Office Action", U.S. Appl. No. 13/118,339, Feb. 11, 2013, 15 pages.
"Non-Final Office Action", U.S. Appl. No. 12/433,667, Jun. 7, 2011, 15 pages.
"Non-Final Office Action", U.S. Appl. No. 11/502,264, Sep. 30, 2009, 15 pages.
"Non-Final Office Action", U.S. Appl. No. 12/469,419, Nov. 9, 2011, 15 pages.
"Final Office Action", U.S. Appl. No. 12/469,458, Nov. 17, 2011, 15 pages.
"PCT Search Report and Written Opinion", Application No. PCT/US2012/047091, Dec. 27, 2012, 15 pages.
"Non-Final Office Action", U.S. Appl. No. 12/469,458, Jul. 1, 2011, 15 pages.
"Non-Final Office Action", U.S. Appl. No. 12/244,545, Aug. 17, 2011, 15 pages.
"Non-Final Office Action", U.S. Appl. No. 12/480,969, Aug. 7, 2012, 15 pages.
"Final Office Action", U.S. Appl. No. 11/502,264, Mar. 29, 2013, 16 pages.
"Non-Final Office Action", U.S. Appl. No. 12/469,480, Oct. 17, 2012, 16 pages.
"Final Office Action", U.S. Appl. No. 12/413,977, Nov. 17, 2011, 16 pages.
"Final Office Action", U.S. Appl. No. 12/244,545, Dec. 7, 2011, 16 pages.
"Non-Final Office Action", U.S. Appl. No. 12/484,845, Dec. 7, 2011, 16 pages.
"Non-Final Office Action", U.S. Appl. No. 12/560,081, Dec. 7, 2011, 16 pages.
"Non-Final Office Action", U.S. Appl. No. 12/433,667, Feb. 3, 2012, 16 pages.
"Final Office Action", U.S. Appl. No. 12/560,081, Mar. 14, 2012, 16 pages.
"Non-Final Office Action", U.S. Appl. No. 12/413,977, Jul. 19, 2011, 17 pages.
"Non-Final Office Action", U.S. Appl. No. 12/983,106, Nov. 9, 2012, 17 pages.
"Final Office Action", U.S. Appl. No. 12/469,480, Feb. 9, 2012, 17 pages.
"Non-Final Office Action", U.S. Appl. No. 11/215,052, Jun. 23, 2011, 17 pages.
"Final Office Action", U.S. Appl. No. 12/433,667, Sep. 13, 2011, 17 pages.
"Non-Final Office Action", U.S. Appl. No. 13/118,333, Jul. 5, 2013, 18 pages.
"Final Office Action", U.S. Appl. No. 13/657,621, Sep. 10, 2013, 18 pages.
"Non-Final Office Action", U.S. Appl. No. 12/244,545, Mar. 27, 2012, 18 pages.
"Non-Final Office Action", U.S. Appl. No. 12/413,977, Jul. 20, 2012, 18 pages.
"Non-Final Office Action", U.S. Appl. No. 12/972,967, Jan. 30, 2013, 19 pages.
"Non-Final Office Action", U.S. Appl. No. 13/657,621, Feb. 7, 2013, 19 pages.
"Non-Final Office Action", U.S. Appl. No. 13/118,257, Mar. 5, 2013, 19 pages.
"Final Office Action", U.S. Appl. No. 12/983,106, Oct. 7, 2013, 19 pages.
"Supplemental Notice of Allowance", U.S. Appl. No. 12/977,584, Sep. 16, 2013, 2 pages.
"Supplemental Notice of Allowance", U.S. Appl. No. 13/655,390, Sep. 19, 2013, 2 pages.
"Supplemental Notice of Allowance", U.S. Appl. No. 12/977,584, Oct. 11, 2013, 2 pages.
"Notice of Allowance", U.S. Appl. No. 12/414,458, Oct. 31, 2011, 2 pages.
"Notice of Allowance", U.S. Appl. No. 12/414,458, Nov. 29, 2011, 2 pages.
"Elecont Quick Desktop 1.0.43", Retrieved from: <http://handheld.softpedia.com/get/System-Utilities/Launcher-Applications/Elecont-Quick-Desktop-72131.shtml> on May 5, 2009., Mar. 13, 2009, 2 pages.
"You've Got Mail 1.4 Build", retrieved from <http://www.fileshome.com/Shows_Animation_Plays_Sound_Automatic_N . . . > on Jan. 6, 2010, Jun. 18, 2007, 2 pages.
"Supplemental Notice of Allowance", U.S. Appl. No. 13/655,390, Jul. 25, 2013, 2 pages.
"Notice of Allowance", U.S. Appl. No. 12/470,558, Aug. 23, 2012, 2 pages.
"Alltel Adds Dedicated Search Key to Phones", Retrieved from: <http://www.phonescoop.com/news/item.php?n=2159> on Nov. 26, 2008., Apr. 12, 2007, 2 Pages.
"Touch Shell Free", Retrieved from: <http://www.pocketpcfreeware.mobi/download-touch-shell-free.html> on May 5, 2009., Feb. 23, 2009, 2 Pages.
"Palette Extender 1.0.2", Retrieved from: <http://palette-extender.en.softonic.com/symbian> on Nov. 6, 2008, Jan. 21, 2003, 2 pages.
"Nokia E61 Tips and Tricks for Keyboard Shortcuts", Retrieved from: <http://www.mobiletopsoft.com/board/1810/nokia-e61-tips-and-tricks-for-keyboard-shortcuts.html> on Dec. 17, 2008., Jan. 27, 2006, 2 Pages.
"Freeware.mobi", Retrieved from: <http://www.palmfreeware.mobi/download-palette.html> on Nov. 6, 2008, Oct. 9, 2001, 2 pages.
"Final Office Action", U.S. Appl. No. 13/656,574, Aug. 23, 2013, 20 pages.
"Final Office Action", U.S. Appl. No. 12/414,476, Dec. 1, 2011, 20 pages.
"Non-Final Office Action", U.S. Appl. No. 13/656,574, Jan. 31, 2013, 21 pages.
"Non-Final Office Action", U.S. Appl. No. 13/229,693, Mar. 12, 2013, 21 pages.
"Final Office Action", U.S. Appl. No. 13/118,339, Aug. 22, 2013, 21 pages.
"Final Office Action", U.S. Appl. No. 12/972,967, Oct. 11, 2013, 21 pages.
"Non-Final Office Action", U.S. Appl. No. 12/414,476, Aug. 3, 2011, 21 pages.
"Non-Final Office Action", U.S. Appl. No. 12/414,476, Nov. 9, 2012, 22 pages.
"Final Office Action", U.S. Appl. No. 13/229,693, Sep. 4, 2013, 23 pages.
"Non-Final Office Action", U.S. Appl. No. 13/655,386, Dec. 26, 2012, 23 pages.
"Final Office Action", U.S. Appl. No. 12/244,545, Sep. 7, 2012, 23 pages.
"Final Office Action", U.S. Appl. No. 13/118,204, Nov. 21, 2013, 24 pages.
"How do you dial 1-800-FLOWERS", Retrieved from: <http://blogs.msdn.com/windowsmobile/archive/2007/02/06/how-do-you-dial-1-800-flowers.aspx> on Nov. 20, 2008, Feb. 6, 2007, 24 pages.
"Final Office Action", U.S. Appl. No. 13/118,347, Aug. 15, 2013, 25 pages.
"Oracle8i Application Developer's Guide—Advanced Queuing", Retrieved from: http://www.cs.umbc.edu/help/oracle8/server.815/a68005/03_adq1i.htm on May 6, 2009., Feb. 1999, 29 Pages.
"Advisory Action", U.S. Appl. No. 12/414,382, Jan. 20, 2012, 3 pages.
"Windows Phone 7 Live Tiles", Retrieved from: <http://www.knowyourmobile.com/microsoft/windowsphone7/startscreen/640737/windows_phone_7_live_tiles.html> on May 11, 2011, Oct. 20, 2010, 3 pages.

(56) **References Cited**

OTHER PUBLICATIONS

"Ask Web Hosting", Retrieved from: <http://www.askwebhosting.com/story/18501/HTC_FUZE_From_ATandampT_Fuses_Fun_and_Function_With_the_One-Touch_Power_of_TouchFLO_3D.html> on May 5, 2009., Nov. 11, 2008, 3 pages.
"SecureMe—Anti-Theft Security Application for S60 3rd", Retrieved from: <http:/www.killermobile.com/newsite/mobile-software/s60-applications/secureme-%11-anti%11theft-security-application-for-s60-3rd.htm> on Jun. 28, 2011, Dec. 15, 2008, 3 pages.
"Advisory Action", U.S. Appl. No. 12/433,605, Apr. 5, 2012, 3 pages.
"Email Notification for Microsoft Outlook and Outlook Express", Retrieved from: <http://www.contextmagic.com/express-notification/> on Sep. 29, 2010, Jul. 21, 2004, 3 pages.
"How do I use Categories with my Weblog?", Retrieved from: <http://tpsupport.mtcs.sixapart.com/tp/us-tp1/how_do_i_use_categories_with_my_weblog.html> on Sep. 28, 2010, Sep. 16, 2009, 3 pages.
"Parallax Scrolling", Retrieved from: <http://en.wikipedia.org/wiki/Parallax_scrolling> on May 5, 2009., May 4, 2009, 3 Pages.
"Final Office Action", U.S. Appl. No. 13/118,321, Dec. 19, 2013, 30 pages.
"Mobile/UI/Designs/TouchScreen/workingUI", Retrieved from: <https://wiki.mozilla.org/Mobile/UI/Designs/TouchScreen/workingUI> on Oct. 26, 2009, 30 pages.
"Non-Final Office Action", U.S. Appl. No. 13/118,321, Jun. 10, 2013, 32 pages.
"Final Office Action", U.S. Appl. No. 13/655,386, Jun. 6, 2013, 34 pages.
"Non-Final Office Action", U.S. Appl. No. 13/224,258, Jan. 8, 2013, 35 pages.
"Final Office Action", U.S. Appl. No. 13/657,789, Jun. 21, 2013, 35 pages.
"Final Office Action", U.S. Appl. No. 13/224,258, Sep. 11, 2013, 37 pages.
"Non-Final Office Action", U.S. Appl. No. 13/657,789, Jan. 9, 2013, 38 pages.
"Calc4M", Retrieved from: <http://www.hellebo.com/Calc4M.html> on Dec. 11, 2008, Sep. 10, 2008, 4 Pages.
"Notice of Allowance", U.S. Appl. No. 12/414,455, Jan. 4, 2012, 4 pages.
"Notice of Allowance", U.S. Appl. No. 12/414,382, Apr. 4, 2012, 4 pages.
"DuoSense™ Multi-Touch Gestures", Retrieved from: <http://www.n-trig.com/Data/Uploads/Misc/DuoSenseMTG_final.pdf>, Jul. 2008, 4 pages.
"Notice of Allowance", U.S. Appl. No. 12/414,434, Aug. 17, 2012, 4 pages.
"Winterface Review", Retrieved from: <http://www.mytodayscreen.com/winterface-review/> on Nov. 12, 2008, Jul. 9, 2008, 42 pages.
"YUI 3: ScrollView [beta]", Retrieved from: <http://developer.yahoo.com/yui/3/scrollview/> on Sep. 28, 2010, 5 pages.
"Notice of Allowance", U.S. Appl. No. 13/492,495, Apr. 26, 2013, 5 pages.
"Notice of Allowance", U.S. Appl. No. 13/655,390, May 24, 2013, 5 pages.
"My Favorite Gadgets, System Monitor II", Retrieved from <http://www.myfavoritegadgets.info/monitors/SystemMonitorII/system-monitorII.html> on Mar. 12, 2013, Jun. 8, 2010, 5 pages.
"Notice of Allowance", U.S. Appl. No. 12/977,584, Jun. 19, 2013, 5 pages.
"Non-Final Office Action", U.S. Appl. No. 13/196,272, Sep. 3, 2013, 5 pages.
"Non-Final Office Action", U.S. Appl. No. 11/305,789, Sep. 21, 2009, 5 pages.
"Notice of Allowance", U.S. Appl. No. 12/978,184, Nov. 6, 2013, 5 pages.
"Keyboard Shortcuts", Retrieved from: <http://www.pctoday.com/editorial/article.asp?article=articles%2F2005%2Ft0311%2F26t11%2F26t11.asp> on Aug. 3, 2009., Nov. 2005, 5 pages.
"Content-Centric E-Mail Message Analysis in Litigation Document Reviews", Retrieved from: <http://www.busmanagement.com/article/Issue-14/Data-Management/Content-Centric-E-Mail-Message-Analysis-in-Litigation-Document-Reviews/> on May 6, 2009, 5 Pages.
"Notice of Allowance", U.S. Appl. No. 11/215,052, Mar. 14, 2012, 5 pages.
"Notice of Allowance", U.S. Appl. No. 12/484,845, Mar. 16, 2012, 5 pages.
"Notice of Allowance", U.S. Appl. No. 12/978,184, Aug. 2, 2013, 5 pages.
"Remapping the Keyboard", Retrieved from: <http://publib.boulder.ibm.com/infocenter/hodhelp/v9r0/index.jsp?topic=/com.ibm.hod9.doc/help/assignkey.html> on Dec. 11, 2008., Jul. 15, 2005, 5 Pages.
"Symbian Applications", Retrieved from: <http://symbianfullversion.blogspot.com/2008_12_01_archive.html> on May 5, 2009., Jan. 2009, 51 Pages.
"Non-Final Office Action", U.S. Appl. No. 13/492,495, Dec. 19, 2012, 6 pages.
"Application User Model IDs", Retrieved from: <http://msdn.microsoft.com/en-us/library/dd378459(VS.85).aspx> on Sep. 28, 2010, 6 pages.
"Notice of Allowance", U.S. Appl. No. 12/414,458, Aug. 10, 2011, 6 pages.
"Non-Final Office Action", U.S. Appl. No. 12/414,434, Aug. 2, 2011, 6 pages.
"MIDTB Tip Sheet: Book Courier", Retrieved from: <http://www.midtb.org/tipsbookcourier.htm> on Dec. 11, 2008., Sep. 26, 2005, 6 Pages.
"Non-Final Office Action", U.S. Appl. No. 12/978,184, Jan. 23, 2013, 7 pages.
"Live Photo Gallery—Getting Started—from Camera to Panorama", Retrieved from: <http://webdotwiz.spaces.live.com/blog/cns!2782760752B93233!1729.entry> on May 5, 2009., Sep. 2008, 7 Pages.
"Non-Final Office Action", U.S. Appl. No. 12/414,434, Jan. 17, 2012, 7 pages.
"Non-Final Office Action", U.S. Appl. No. 12/721,422, Oct. 1, 2012, 7 pages.
"Final Office Action", U.S. Appl. No. 12/414,382, Dec. 23, 2011, 7 pages.
"Extended European Search Report", European Patent Application No. 09818253.8, Apr. 10, 2012, 7 pages.
"Notice of Allowance", U.S. Appl. No. 12/470,558, Apr. 2, 2012, 7 pages.
"Non-Final Office Action", U.S. Appl. No. 12/414,434, May 31, 2012, 7 pages.
"Womma", Retrieved from: <http://www.womma.org/blog/links/wom-trends/> on May 5, 2009., 2007, 70 Pages.
"PCT Search Report and Written Opinion", PCT Application No. PCT/US2010/038730, Jan. 19, 2011, 8 pages.
"Notice of Allowance", U.S. Appl. No. 13/196,272, Nov. 8, 2013, 8 pages.
"Notice of Allowance", U.S. Appl. No. 11/305,789, Nov. 23, 2009, 8 pages.
"Non-Final Office Action", U.S. Appl. No. 12/977,584, Dec. 7, 2012, 8 pages.
"PCT Search Report and Written Opinion", Application No. PCT/US2011/055513, Mar. 27, 2012, 8 pages.
"Multi-touch", Retrieved from <http://en.wikipedia.org/wiki/Multi-touch#Microsoft_Surface> on Apr. 24, 2009, Apr. 17, 2009, 8 pages.
"International Search Report and Written Opinion", International Application No. PCT/US2011/055514, May 22, 2012, 8 pages.
"PCT Search Report and Written Opinion", Application No. PCT/US2011/055512, May 24, 2012, 8 pages.
"PCT Search Report and Written Opinion", Application No. PCT/US2011/055520, May 9, 2012, 8 pages.
"PCT Search Report and Written Opinion", Application No. PCT/US2011/055524, Jun. 1, 2012, 8 pages.
"Non-Final Office Action", U.S. Appl. No. 12/414,458, Jul. 6, 2011, 8 pages.
"Non-Final Office Action", U.S. Appl. No. 12/414,455, Aug. 29, 2011, 8 pages.

(56) **References Cited**

OTHER PUBLICATIONS

"PCT Search Report and Written Opinion", Application No. PCT/US2011/065702, Aug. 29, 2012, 8 pages.
"Non-Final Office Action", U.S. Appl. No. 13/492,495, Sep. 17, 2012, 8 pages.
"PCT Search Report and Written Opinion", Application No. PCT/US2011/055736, Sep. 17, 2012, 8 pages.
"PCT Search Report and Written Opinion", Application No. PCT/US2011/067073, Sep. 17, 2012, 8 pages.
"Keyboard (5)", Retrieved from: <http://landru.uwaterloo.ca/cgi-bin/man.cgi?section=5&topic=keyboard> on Dec. 11, 2008., Aug. 11, 1997, 8 Pages.
"Oracle8i Application Developer's Guide—Advanced Queuing Release 2 (8.1.6)", Retrieved from: http://www.cs.otago.ac.nz/oradocs/appdev.817/a76938/adq01in5.htm on May 6, 2009., Dec. 1999, 8 pages.
"Final Office Action", U.S. Appl. No. 11/502,264, Apr. 3, 2009, 9 pages.
"Non-Final Office Action", U.S. Appl. No. 12/470,558, Nov. 22, 2011, 9 pages.
"PCT Search Report and Written Opinion", Application No. PCT/US2011/055511, Apr. 24, 2012, 9 pages.
"PCT Search Report and Written Opinion", Application No. PCT/US2011/055523, May 10, 2012, 9 pages.
"International Search Report and Written Opinion", International Application No. PCT/US2011/055521, May 15, 2012, 9 pages.
"International Search Report and Written Opinion", International Application No. PCT/US2011/055522, May 15, 2012, 9 pages.
"Notice of Allowance", U.S. Appl. No. 12/721,422, Jul. 11, 2013, 9 pages.
"Non-Final Office Action", U.S. Appl. No. 12/414,382, Jul. 26, 2011, 9 pages.
"PCT Search Report and Written Opinion", Application No. PCT/US2011/055496, Sep. 12, 2012, 9 pages.
"PCT Search Report and Written Opinion", Application No. PCT/US2011/055712, Sep. 21, 2012, 9 pages.
"PCT Search Report and Written Opinion", Application No. PCT/US2011/055493, 9/26/212, 9 pages.
"PCT Search Report and Written Opinion", Application No. PCT/US2011/055478, Sep. 27, 2012, 9 pages.
"PCT Search Report and Written Opinion", Application No. PCT/US2011/055746, Sep. 27, 2012, 9 pages.
"Introduction to Windows Touch", Retrieved from: <http://download.microsoft.com/download/a/d/f/adf1347d-08dc-41a4-9084-623b1194d4b2/Win7_touch.docx>, Dec. 18, 2008, pp. 1-7.
"Adobe Acrobat 8 Standard User Guide", Adobe Systems Incorporated,2007, pp. 34 & 36.
"iPod touch User Guide for iPhone OS 3.0 Software", Apple Inc. ,2009, 153 pages.
"International Search Report", Application No. PCT/US2010/028553, Application Filing Date: Mar. 24, 2010,Nov. 9, 2010, 9 pages.
"Android 2.3 User's Guide", AUG-2.3-103, Android mobile technology platform 2.3,Dec. 13, 2010, 380 pages.
"eXtreme Energy Conservation: Advanced Power-Saving Software for Wireless Devices", White Paper, Freescale Semiconductor, Inc., Document No. XTMENRGYCNSVWP, Rev #0, available at <http://www.freescale.com/files/32bit/doc/white_paper/XTMENRGYCNSVWP.pdf>,Feb. 2006, 15 pages.
"Enhanced IBM Power Systems Software and PowerVM Restructuring", IBM United States Announcement 208-082, dated Apr. 8, 2008, available at <http://www.ibm.com/common/ssi/rep_ca/2/897/ENUS208-082/ENUS208082.PDF>,Apr. 8, 2008, pp. 1-19.
"Kiosk Browser Chrome Customization Firefox 2.x", Retrieved from: <http://stlouis-shopper.com/cgi-bin/mozdev-wiki/,pl?ChromeCustomization> on Oct. 22, 2008 Making a new chrome for the kiosk browser, Kiosk Project Kiosk Browser Chrome Customization Firefox-2.x,Aug. 16, 2007, 2 pages.
"Internet Explorer Window Restrictions", Retrieved from: http://technet.microsoft.com/en-us/library/cc759517(WS.10).aspx on Jun. 28, 2011, Microsoft TechNet, 5 pages.
"iPad User Guide", retrieved from <http://cyndidannerkuhn.info/CDK/iPads_Resources_files/iPad_User_Guide.pdf> on Jun. 17, 2011, 154 pages.
"Notifications", retrieved from <http://msdn.microsoft.com/en-us/library/aa511497.aspx> on May 10, 2011, 16 pages.
"How Do I Cancel a "Drag" Motion on an Android Seekbar?", retrieved from <http://stackoverflow.com/questions/2917969/how-do-i-cancel-a-drag-motion-on-an-android-seekbar> on Jun. 20, 2011,May 28, 2010, 1 page.
"Windows 8 Is Gorgeous, But Is It More Than Just A Shell? (Video)", retrieved from <http://techcrunch.com/2011/06/02/windows-8-gorgeous-shell-video/> on Jun. 20, 2011,Jun. 2, 2011, 6 pages.
"Windows Phone 7 (Push Notification)", retrieved from <http://unknownerror.net/2011-06/windows-phone-7-push-notification-36520> on Jul. 6, 2011, 4 pages.
"Snap", Windows 7 Features, retrieved from <http://windows.microsoft.com/en-US/windows7/products/features/snap> on Sep. 23, 2011, 2 pages.
"User Guide", retrieved from <http://wireframesketcher.com/help/help.html> on Jun. 17, 2011, 19 pages.
"Top Android App: Swipepad", Best Android Apps Review, retrieved from <http://www.bestandroidappsreview.com/2011/01/top-android-app-swipepad-launcher.html> on May 11, 2011, 4 pages.
"ONYX Graphics Announces New ONYX Prepedge Job Preparation Software", retrieved from <http://www.largeformatreview.com/rip-software/433-onyx-graphics-announces-new-onyx-> on May 10, 2011, 2 pages.
"Working with Multiple Windows", MSOFFICE tutorial!, retrieved from <http://www.msoffice-tutorial.com/working-with-multiple-windows.php> on Sep. 23, 2011, 3 pages.
"New Features in WhatsUp Gold v12.0", retrieved from <http://www.netbright.co.th/?name=product&file=readproduct&id=12> on Jun. 10, 2011, 4 pages.
"Basics of Your Device: Get Familiar with the Home Screen", Nokia USA—How to, retrieved from <http://www.nokia.ca/get-support-and-software/product-support/c6-01/how-to#> on May 11, 2011, 3 pages.
"OmneMon™ System Resource Metrics", retrieved from <http://www.omnesys.com/documents/OmneMonSRM_Brochure.pdf> on Jun. 10, 2011, 3 pages.
"The Map Screen", retrieved from <http://www.symbianos.org/whereamiusersguide> on Jun. 17, 2011, 3 pages.
"Top 3 Task Switchers for Androd", TechCredo, retrieved from <http://www.techcredo.com/android/top-3-task-switchers-for-android> on May 11, 2011,Mar. 9, 2011, 5 pages.
"Magic mouse", Retrieved from: <http://www.apple.com/magicmouse/> on May 10, 2011, 3 pages.
Al "Droptiles—Metro Style Live Tiles Enabled Web 2.0 Dashboard", Retrieved from <http://oazabir.github.com/Droptiles/> on Mar. 5, 2013, Jul. 18, 2012, 7 pages.
Bates, "A Framework to Support Large-Scale Active Applications", University of Cambridge Computer Laboratory, Available at <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.48.1690&rep=rep1&type=pdf >,1996, 8 pages.
Beiber, et al., "Screen Coverage: A Pen-Interaction Problem for PDA's and Touch Screen Computers", In Proceedings of ICWMC 2007,Mar. 2007, 6 pages.
Bjork, et al., "Redefining the Focus and Context of Focus+Context Visualizations", In Proceedings of INFOVIS 2000, Available at <http://www.johan.redstrom.se/papers/redefining.pdf>,Oct. 2000, 9 pages.
Blankenburg, "31 Days of Mango | Day #11: Live Tiles", Retrieved from <http://www.jeffblankenburg.com/2011/11/11/31-days-of-mango-day-11-live-tiles/> on Mar. 5, 2013, Nov. 11, 2011, 10 pages.
Bowes, et al., "Transparency for Item Highlighting", Faculty of Computing Science, Dalhousie University, Available at <http://torch.cs.dal.ca/~dearman/pubs/GI2003-bowes,dearman,perkins-paper.pdf>,2003, 2 pages.
Bruzzese, "Using Windows 7, Managing and Monitoring Windows 7—Chapter 11", Que Publishing, May 5, 2010, 33 pages.

(56) **References Cited**

OTHER PUBLICATIONS

Buring, "User Interaction with Scatterplots on Small Screens—A Comparative Evaluation of Geometric-Semantic Zoom and Fisheye Distortion", IEEE Transactions on Visualization and Computer Graphics, vol. 12, Issue 5, Available at <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.134.4568&rep=rep1&type=pdf>,Sep. 2006, pp. 829-836.

Carrera, et al., "Conserving Disk Energy in Network Servers", available at <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.6.8301&rep=rep1&type=ps>, Nov. 2002, 15 pages.

Cawley, "Windows Phone 7 Customization Tips and Tricks", retrieved from <http://www.brighthub.com/mobile/windows-mobile-platform/articles/95213.aspx> on Jun. 20, 2011,May 16, 2011, 2 pages.

Cawley, "How to Customise Your Windows Phone 7", Retrieved from: <http://www.brighthub.com/mobile/windows-mobile-platform/articles/95213.aspx> on May 10, 2011,Nov. 12, 2010, 3 pages.

Cohen, et al., "Wang Tiles for Image and Texture Generation", In Proceedings of SIGGRAPH 2003, Available <http://research.microsoft.com/en-us/um/people/cohen/WangFinal.pdf>,2003, 8 pages.

Damien, "7 Ways to Supercharge Multitasking in Android", retrieved from <http://maketecheasier.com/7-ways-to-supercharge-multitasking-in-android/2011/01/22/> on May 11, 2011,Jan. 22, 2011, 5 pages.

Davis, "A WPF Custom Control for Zooming and Panning", Retrieved from: <http://www.codeproject.com/KB/WPF/zoomandpancontrol.aspx> on Sep. 28, 2010, Jun. 29, 2010, 21 pages.

Delimarsky, "Sending Tile Push Notifications on Windows Phone 7", retrieved from <http://mobile.dzone.com/articles/sending-tile-push> on May 10, 2011,Aug. 25, 2010, 2 pages.

Denoue, et al., "WebNC: Efficient Sharing of Web Applications", In Proceedings of WWW 2009, Available at <http://www.fxpal.com/publications/FXPAL-PR-09-495.pdf>,2009, 2 pages.

Dolcourt, "Webware", Retrieved from: <http://news.cnet.com/webware/?categoryId=2010> on May 5, 2009., 13 Pages.

Dunsmuir, "Selective Semantic Zoom of a Document Collection", Available at <http://www.cs.ubc.ca/~tmm/courses/533/projects/dustin/proposal.pdf>,Oct. 30, 2009, pp. 1-9.

Egan, "Modifying Live Tiles in a Background Process", Retrieved from <http://thesociablegeek.com/windows-8/livetiles/modifying-live-tiles-in-a-background-process/> on Mar. 5, 2013, Aug. 31, 2012, 24 pages.

Farrugia, et al., "Cell Phone Mini Challenge: Node-Link Animation Award Animating Multivariate Dynamic Social Networks", IEEE Symposium on Visual Analytics Science and Technology, Columbus, OH, USA, Oct. 21-23, 2008, Oct. 21, 2008, 2 pages.

Fisher, "Cool Discussion of Push Notifications—Toast and Tile—on Windows Phone", Retrieved from: <http://www.windowsphoneexpert.com/Connection/forums/p/4153/18399.aspx> on Sep. 29, 2010, May 3, 2010, 3 pages.

Gade, "Samsung Alias u740", Retrieved from: <http://www.mobiletechreview.com/phones/Samsung-U740.htm> on Nov. 20, 2008, Mar. 14, 2007, 6 pages.

Gao, "A General Logging Service for Symbian based Mobile Phones", Retrieved from: <http://www.nada.kth.se/utbildning/grukth/exjobb/rapportlistor/2007/rapporter07/gao_rui_07132.pdf.> on Jul. 17, 2008, Feb. 2007, pp. 1-42.

Gralla, "Windows XP Hacks, Chapter 13—Hardware Hacks", O'Reilly Publishing, Feb. 23, 2005, 25 pages.

Ha, et al., "SIMKEYS: An Efficient Keypad Configuration for Mobile Communications", Retrieved from: < http://ieeexplore.ieee.org/stamp/stamp.jsp?arnumber=01362557.> on Dec. 17, 2008, Nov. 2004, 7 Pages.

Harrison, "Symbian OS C++ for Mobile Phones vol. 3", Retrieved from: <http://www.amazon.co.uk/Symbian-OS-Mobile-Phones-Press/dp/productdescription/0470066415> on Oct. 23, 2008, Symbian Press, Jun. 16, 2003, 4 pages.

Hickey, "Google Android has Landed; T-Mobile, HTC Unveil G1", Retrieved from: <http://www.crn.com/retail/210603348> on Nov. 26, 2008., Sep. 23, 2008, 4 pages.

Horowitz, "Installing and Tweaking Process Explorer part 2", Retrieved from <http://web.archive.org/web/20110510093838/http://blogs.computerworld.com/16165/installing_and_tweaking_process_explorer_part_2> on Mar. 12, 2013, May 23, 2010, 7 pages.

Janecek, et al., "An Evaluation of Semantic Fisheye Views for Opportunistic Search in an Annotated Image Collection", Available at <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.67.3084&rep=rep1&type=pdf >,Feb. 15, 2005, pp. 1-15.

Kcholi, "Windows CE .NET Interprocess Communication", Retrieved from http://msdn.microsoft.com/en-us/library/ms836784.aspx on Jul. 17, 2008., Jan. 2004, 15 Pages.

Keranen, "OpenGL-based User Interface Toolkit for Symbian Mobile Devices", Master of Science Thesis, Tamere University of Technology, Department of Information Technology, Apr. 6, 2005, 88 pages.

Kurdi, "WinSplit Revolution", Retrieved from <http://www.freewaregenius.com/winsplit-revolution/> on Jun. 30, 2013, Aug. 22, 2007, 4 Pages.

Kurdi, "Acer GridVista: snap your windows to pre-defined sections on your screen(s)", Retrieved from <http://www.freewaregenius.com/acer-gridvista-snap-your-windows-to-pre-defined-sections-of-your-screens/> on Jun. 30, 2013, Jan. 19, 2010, 6 pages.

La, "Parallax Gallery", Available at <http://webdesignerwall.comtutorials/parallax-gallery/comment-page-1>,Apr. 25, 2008, 16 pages.

Livingston, et al., "Windows 95 Secrets", 1995, I DG Books Worldwide, 3rd Edition, 1995, pp. 121-127.

Long, "Gmail Manager 0.6", Retrieved from: <https://addons.mozilla.org/en-US/firefox/addon/1320/> on Sep. 29, 2010, Jan. 27, 2010, 4 pages.

Mann, et al., "Spectrum Analysis of Motion Parallax in a 3D Cluttered Scene and Application to Egomotion", Journal of the Optical Society of America A, vol. 22, No. 9, Available at <http://www.cs.uwaterloo.ca/~mannr/snow/josa-mann-langer.pdf>,Sep. 2005, pp. 1717-1731.

Mantia, "Multitasking: What Does It Mean?", retrieved from <http://mantia.me/blog/multitasking/> on Sep. 23, 2011, 3 pages.

Mao, "Comments of Verizon Wireless Messaging Services, LLC", Retrieved from: http://www.ntia.doc.gov/osmhome/warnings/comments/verizon.htm on May 6, 2009., Aug. 18, 2000, 5 Pages.

Marie, "MacBook Trackpad Four Fingers Swipe Left/Right to Switch Applications", MacBook Junkie, retrieved from <http://www.macbookjunkie.com/macbook-trackpad-four-fingers-swipe-left-right-to-switch-applications/> on May 11, 2011,Nov. 13, 2010, 4 pages.

Mei, et al., "Probabilistic Multimodality Fusion for Event Based Home Photo Clustering", Retrieved from: <http://ieeexplore.ieee.org//stamp/stamp.jsp?tp=&arnumber=04036960.>, Dec. 26, 2006, pp. 1757-1760.

Nordgren, "Development of a Touch Screen Interface for Scania Interactor", Master's Thesis in Computing Science, UMEA University, Available at <http://www.cs.umu.se/education/examina/Rapporter/PederNordgren.pdf>,Apr. 10, 2007, pp. 1-59.

Oliver, "Potential iPhone Usability and Interface Improvements", Retrieved from: <http://www.appleinsider.com/articles/08/09/18/potential_iphone_usability_and_interface_improvements.html> on Nov. 12, 2008, AppleInsider,Sep. 18, 2008, 4 pages.

Oryl, "Review: Asus P527 Smartphone for North America", Retrieved from: <http://www.mobileburn.com/review.jsp?Id=4257> on Dec. 17, 2008., Mar. 5, 2008, 1 Page.

Padilla, "Palm Treo 750 Cell Phone Review—Hardware", Retrieved from: <http://www.wirelessinfo.com/content/palm-Treo-750-Cell-Phone-Review/Hardware.htm> on Dec. 11, 2008., Mar. 17, 2007, 4 Pages.

Paul, "Hands-on: KDE 4.5 Launches with Tiling, New Notifications", Retrieved from: <http://arstechnica.com/open-source/reviews/2010/08/hands-on-kde-45-launches-with-tiling-new-notifications.ars> on Sep. 29, 2010, Aug. 2010, 3 pages.

(56) **References Cited**

OTHER PUBLICATIONS

Pendharkar, "Fluid Home Screen for Mobile Phones", Helsinki Metropolia University of Applied Sciences, Master of Engineering, Information Technology, Thesis, Available at <http://theseus17-kk.lib.helsinki.fi/bitstream/handle/10024/46481/FinalThesis3.pdf?sequence=1/>,Apr. 12, 2012, 48 pages.

Perry, "Teach Yourself Windows 95 in 24 Hours", 1997, Sams Publishing, 2nd Edition, 1997, pp. 193-198.

Raghaven, et al., "Model Based Estimation and Verification of Mobile Device Performance", Available at http://alumni.cs.ucsb.edu/~raimisl/emsoft04_12.pdf.,Sep. 27-29, 2004, 10 Pages.

Rathbone, "Windows Phone 7 Live Tile Schedules—How to Execute Instant Live Tile Updates", Retrieved from <http://www.diaryofaninja.com/blog/2011/04/03/windows-phone-7-live-tile-schedules-ndash-executing-instant-live-tile-updates> on Mar. 11, 2013, Apr. 3, 2011, 8 pages.

Ray, "Microsoft Re-Tiles Mobile Platform for Windows 7 Era", retrieved from <http://www.theregister.co.uk/2010/02/15/windows_phone_7_series/> on May 11, 2011,Feb. 15, 2010, 2 pages.

Reed, "Microsoft Demos Windows Mobile 6.1 at CTIA", Retrieved from: <http://www.networkworld.com/news/2008/040208-ctia-microsoft-windows-mobile.html> on Jul. 18, 2008, Apr. 2, 2008, 1 page.

Remond, "Mobile Marketing Solutions", Retrieved from: <http://www.mobilemarketingmagazine.co.uk/mobile_social_networking/> on May 5, 2009., Apr. 28, 2009, 16 Pages.

Rice, et al., "A System for Searching Sound Palettes", Proceedings of the Eleventh Biennial Symposium on Arts and Technology,, Available at <http://www.comparisonics.com/FindSoundsPalettePaper.pdf>,Feb. 2008, 6 pages.

Ritchie, "iOS 4 features: iPod touch Wi-Fi stays connected when asleep—iPhone too?", Retrieved from: <http://www.goip.com/2010/06/ios-4-features-ipod-touch-wi-fi-stays-connected-when-asleep-%E2%80%94-iphone-too/> on Sep. 30, 2010, Jun. 14, 2010, 2 pages.

Ritscher, "Using Surface APIs in your WPF application—Part 1", Retrieved from: <http://blog.wpfwonderland.com/2009/06/30/using-surface-apis-in-your-wpf-application/> on Sep. 28, 2010, Jun. 30, 2009, 7 pages.

Roberts, "Touching and Gesturing on the iPhone", Available at <http://www.sitepen.com/blog/2008/07/10/touching-and-gesturing-on-the-iphone/comments-pare-1>,Jul. 10, 2008, 16 pages.

Sandoval, "A development platform and execution environment for mobile applications", Universidad Autónoma de Baja California, School of Chemical Sciences and Engineering, Available at <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.86.7989&rep=rep1&type=pdf >,2004, 18 pages.

Singh, et al., "CINEMA: Columbia InterNet Extensible Multimedia Architecture", Available at <http://www1.cs.columbia.edu/~library/TR-repository/reports/reports-2002/cucs-011-02.pdf>,Sep. 3, 2002, 83 Pages.

Smith, et al., "GroupBar: The TaskBar Evolved", Proceedings of OZCHI 2003, Available at <http://research.microsoft.com/pubs/64316/ozchi2003-groupbar.pdf>,Nov. 2003, pp. 1-10.

Steinicke, et al., "Multi-Touching 3D Data: Towards Direct Interaction in Stereoscopic Display Environments coupled with Mobile Devices", Advanced Visual Interfaces (AVI) Workshop on Designing Multi-Touch Interaction Techniques for Coupled Public, Available at <http://viscg.uni-muenster.de/publications/2008/SHSK08/ppd-workshop.-pdf.>,Jun. 15, 2008, 4 Pages.

Suror, "PocketShield—New Screenlock App for the HTC Diamond and Pro", Retrieved from: <http://wmpoweruser.com/?tag=htc-touch-diamond> on Jun. 28, 2011, Oct. 23, 2008, 2 pages.

Terpstra, "Beta Beat: Grape, a New Way to Manage Your Desktop Clutter", Retrieved from: Beta Beat: Grape, a New Way to Manage Your Desktop Clutter on Jun. 28, 2011, Apr. 14, 2009, 4 pages.

Vallerio, et al., "Energy-Efficient Graphical User Interface Design", Retrieved from: <http://www.cc.gatech.edu/classes/AY2007/cs7470_fall/zhong-energy-efficient-user-interface.pdf>, Jun. 10, 2004, pp. 1-13.

Vermeulen, "BlackBerry PlayBook Hands-on", retrieved from <http://mybroadband.co.za/news/gadgets/20104-BlackBerry-PlayBook-hands-.html> on May 11, 2011,May 8, 2011, 4 pages.

Viticci, "Growl 1.3 To Be Released on Mac App Store, Introduce Lion Support and Drop GrowlMail Support", Retrieved from: <http://www.macstories.net/stories/growl-1-3-to-be-released-on-mac-app-store-introduce-lion-support-and-drop-growlmail-support/> on Jul. 22, 2011,Jul. 6, 2011, 6 pages.

Vornberger, "Bluetile", Retrieved from: <http://www.bluetile.org> on Sep. 29, 2010, 5 pages.

Wilson, "How the iPhone Works", Retrieved from: <http://electronics.howstuffworks.com/iphone2.htm> on Apr. 24, 2009, Jan. 2007, 9 pages.

Wilson, "Robust Computer Vision-Based Detection of Pinching for One and Two-Handed Gesture Input", In Proceedings of UIST 2006, Available at <http://research.microsoft.com/en-us/um/people/awilson/publications/wilsonuist2006/uist%202006%20taffi.pdf>,Oct. 2006, 4 pages.

Wobbrock, et al., "User-Defined Gestures for Surface Computing", CHI 2009, Apr. 4-9, 2009, Boston, MA, available at <http://faculty.washington.edu/wobbrock/pubs/chi-09.2.pdf>,Apr. 4, 2009, 10 pages.

Wu, et al., "Achieving a Superior Ownership Experience in Manageability and Quality for Siebel CRM", available at <http://www.oracle.com/us/products/enterprise-manager/superior-exp-for-siebel-crm-068962.pdf>,Aug. 2008, 25 pages.

Wyatt, "/Flash/the art of parallax scrolling", .net Magazine,Aug. 1, 2007, pp. 74-76.

Yang, et al., "Semantic Photo Album Based on MPEG-4 Compatible Application Format", Retrieved from: <http://ieeexplore.ieee.org/stamp/stamp.jsp?arnumber=04146254.>, 2007, 2 Pages.

"Final Office Action", U.S. Appl. No. 13/224,258, Jul. 18, 2014, 39 pages.

"Final Office Action", U.S. Appl. No. 13/228,876, Jul. 18, 2014, 15 pages.

"First Examination Report", NZ Application No. 618269, May 20, 2014, 2 pages.

"First Examination Report", NZ Application No. 618284, May 20, 2014, 2 pages.

"Foreign Office Action", CN Application No. 201180071186.4, Jun. 13, 2014, 12 pages.

"Non-Final Office Action", U.S. Appl. No. 13/118,288, Jul. 2, 2014, 17 pages.

"Non-Final Office Action", U.S. Appl. No. 13/229,693, Jun. 20, 2014, 25 pages.

"Non-Final Office Action", U.S. Appl. No. 13/229,702, Jul. 3, 2014, 28 pages.

"Non-Final Office Action", U.S. Appl. No. 13/657,621, Jul. 18, 2014, 22 pages.

"Non-Final Office Action", U.S. Appl. No. 13/657,646, Aug. 12, 2014, 14 pages.

"Notice of Allowance", U.S. Appl. No. 13/118,204, Jul. 8, 2014, 8 pages.

"Notice of Allowance", U.S. Appl. No. 13/657,789, Aug. 4, 2014, 16 pages.

"Authoritative Dictionary of IEEE Standards Terms, 7th ed.", Definitions—processor, memory, and storage, 2000, 3 pages.

"Extended European Search Report", EP Application No. 11872137.2, Apr. 9, 2015, 12 pages.

"Final Office Action", U.S. Appl. No. 13/118,321, Apr. 2, 2015, 30 pages.

"Foreign Notice of Allowance", CN Application No. 201110429183.5, Mar. 9, 2015, 4 Pages.

"Foreign Office Action", CN Application No. 201210317470.1, Feb. 11, 2015, 9 pages.

"Foreign Office Action", CN Application No. 201210331670.2, Mar. 25, 2015, 14 pages.

"Foreign Office Action", CN Application No. 201210331686.3, Mar. 3, 2015, 14 pages.

"Non-Final Office Action", U.S. Appl. No. 13/073,300, Apr. 30, 2015, 15 pages.

"Non-Final Office Action", U.S. Appl. No. 13/229,693, Apr. 23, 2015, 28 pages.

(56) **References Cited**

OTHER PUBLICATIONS

"Non-Final Office Action", U.S. Appl. No. 13/550,432, Apr. 27, 2015, 15 pages.
"Non-Final Office Action", U.S. Appl. No. 13/904,880, May 4, 2015, 22 pages.
"Notice of Allowance", U.S. Appl. No. 13/118,333, May 4, 2015, 16 pages.
"Notice of Allowance", U.S. Appl. No. 13/118,339, Mar. 31, 2015, 7 pages.
"Notice of Allowance", U.S. Appl. No. 13/118,347, Apr. 1, 2015, 7 pages.
"Notice of Allowance", U.S. Appl. No. 13/229,702, Apr. 29, 2015, 7 pages.
"Rename a file", Retrieved from <http://windows.microsoft.com/en-us/windows7/rename-a-file> on Apr. 27, 2015, Aug. 24, 2009, 1 page.
"Supplemental Notice of Allowance", U.S. Appl. No. 14/089,149, Mar. 20, 2015, 2 pages.
"Corrected Notice of Allowance", U.S. Appl. No. 13/656,574, Jan. 13, 2015, 4 pages.
"Corrected Notice of Allowance", U.S. Appl. No. 13/656,574, Dec. 12, 2014, 4 pages.
"Corrected Notice of Allowance", U.S. Appl. No. 14/089,149, Feb. 20, 2015, 2 pages.
"Extended European Search Report", EP Application No. 11866553.8, Dec. 9, 2014, 7 pages.
"Extended European Search Report", EP Application No. 11866579.3, Oct. 9, 2014, 7 pages.
"Extended European Search Report", EP Application No. 11866699.9, Jan. 15, 2015, 6 pages.
"Extended European Search Report", EP Application No. 11866772.4, Jan. 15, 2015, 6 pages.
"Extended European Search Report", EP Application No. 11867033.0, Nov. 27, 2014, 8 pages.
"Final Office Action", U.S. Appl. No. 13/118,265, Nov. 6, 2014, 19 pages.
"Final Office Action", U.S. Appl. No. 13/118,288, Nov. 7, 2014, 14 pages.
"Final Office Action", U.S. Appl. No. 13/118,292, Dec. 5, 2014, 30 pages.
"Final Office Action", U.S. Appl. No. 13/228,888, Oct. 24, 2014, 29 pages.
"Final Office Action", U.S. Appl. No. 13/228,931, Dec. 19, 2014, 27 pages.
"Final Office Action", U.S. Appl. No. 13/228,945, Oct. 23, 2014, 24 pages.
"Final Office Action", U.S. Appl. No. 13/229,693, Jan. 6, 2015, 24 pages.
"Final Office Action", U.S. Appl. No. 13/229,702, Jan. 15, 2015, 24 pages.
"Final Office Action", U.S. Appl. No. 13/657,621, Jan. 15, 2015, 22 pages.
"Foreign Notice of Acceptance", NZ Application No. 618269, Oct. 31, 2014, 1 Page.
"Foreign Notice of Allowance", CN Application No. 201110437572.2, Mar. 3, 2015, 3 Pages.
"Foreign Office Action", CN Application No. 201110437542.1, Jan. 28, 2015, 7 pages.
"Foreign Office Action", CN Application No. 201110437542.1, Aug. 20, 2014, 8 pages.
"Foreign Office Action", CN Application No. 201110454251.3, Feb. 28, 2015, 9 Pages.
"Foreign Office Action", CN Application No. 201110454251.3, Oct. 21, 2014, 13 Pages.
"Foreign Office Action", CN Application No. 201180071186.4, Jan. 20, 2015, 8 pages.
"Foreign Office Action", CN Application No. 201180071196.8, Sep. 11, 2014, 13 pages.
"Foreign Office Action", CN Application No. 201210331158.8, Sep. 3, 2014, 16 Pages.
"Foreign Office Action", CN Application No. 201210331188.9, Oct. 10, 2014, 12 pages.
"Foreign Office Action", CN Application No. 201210331564.4, Dec. 3, 2014, 12 pages.
"Foreign Office Action", CN Application No. 201210331584.1, Nov. 3, 2014, 14 pages.
"Foreign Office Action", CO Application No. 13300256, Sep. 24, 2014, 8 Pages.
"Foreign Office Action", CO Application No. 13300265, Sep. 24, 2014, 10 Pages.
"Non-Final Office Action", U.S. Appl. No. 12/972,967, Nov. 6, 2014, 17 pages.
"Non-Final Office Action", U.S. Appl. No. 13/118,321, Nov. 12, 2014, 33 pages.
"Non-Final Office Action", U.S. Appl. No. 13/118,339, Dec. 10, 2014, 16 pages.
"Non-Final Office Action", U.S. Appl. No. 13/118,347, Dec. 3, 2014, 28 pages.
"Non-Final Office Action", U.S. Appl. No. 13/228,707, Nov. 13, 2014, 20 pages.
"Non-Final Office Action", U.S. Appl. No. 13/228,876, Jan. 29, 2015, 18 pages.
"Non-Final Office Action", U.S. Appl. No. 13/229,155, Jan. 7, 2015, 14 pages.
"Non-Final Office Action", U.S. Appl. No. 13/345,383, Jan. 29, 2015, 5 pages.
"Non-Final Office Action", U.S. Appl. No. 14/089,149, Nov. 3, 2014, 8 pages.
"Notice of Allowance", U.S. Appl. No. 13/657,646, Feb. 6, 2015, 15 pages.
"Notice of Allowance", U.S. Appl. No. 14/089,149, Dec. 5, 2014, 4 pages.
"Supplemental Notice of Allowance", U.S. Appl. No. 13/118,204, Oct. 2, 2014, 2 pages.
"Supplemental Notice of Allowance", U.S. Appl. No. 13/118,204, Oct. 23, 2014, 3 pages.
"Supplemental Notice of Allowance", U.S. Appl. No. 13/656,574, Feb. 25, 2015, 4 pages.
Camick, "Wrap Layout", Java Tips Weblog, retrieved from <https://tips4java.wordpress.com/2008/11/06/wrap-layout/> on Jan. 11, 2015, Nov. 6, 2008, 28 pages.
Webmonkey "HTML Cheatsheet", Retrieved From: <http://www.webmonkey.com/2010/02/html_cheatsheet> on Nov. 7, 2014, Feb. 15, 2010, 5 pages.
"Corrected Notice of Allowance", U.S. Appl. No. 13/118,333, Jun. 1, 2015, 4 pages.
"Extended European Search Report", EP Application No. 11871863.4, May 11, 2015, 8 pages.
"Extended European Search Report", EP Application No. 11871917.8, May 11, 2015, 9 pages.
"Final Office Action", U.S. Appl. No. 13/228,707, Jun. 1, 2015, 20 pages.
"Final Office Action", U.S. Appl. No. 13/228,876, Jun. 19, 2015, 20 pages.
"Final Office Action", U.S. Appl. No. 13/229,155, Jun. 4, 2015, 16 pages.
"Foreign Office Action", CL Application No. 3368-2013, May 7, 2015, 7 pages.
"Foreign Office Action", CL Application No. 3370-2013, May 7, 2015, 6 pages.
"Foreign Office Action", CN Application No. 201180071186.4, Jun. 2, 2015, 7 pages.
"Foreign Office Action", CN Application No. 201210331158.8, May 11, 2015, 7 pages.
"Foreign Office Action", CO Application No. 13300256, Apr. 11, 2015, 8 Pages.
"Foreign Office Action", CO Application No. 13300265, Apr. 21, 2015, 11 Pages.
"Foreign Office Action", PH Application No. PH/1/2013/502367, Apr. 24, 2015, 3 pages.
"Non-Final Office Action", U.S. Appl. No. 14/659,442, Jul. 7, 2015, 7 pages.

(56) **References Cited**

OTHER PUBLICATIONS

"Notice of Allowance", U.S. Appl. No. 13/345,383, May 18, 2015, 5 pages.
Bederson,"Implementing a Zooming User Interface: Experience Building Pad++", Software Practice & Experience, Wiley & Sons, Aug. 1998, 34 pages.
Bederson,"Jazz: An Extensible Zoomable User Interface Graphics Toolkit in Java", Proceedings of the 2000 ACM SIGCPR Conference, Apr. 2000, 11 pages.
Jetter,"Materializing the Query with Facet-Streams—A Hybrid Surface for Collaborative Search on Tabletops", May 7, 2011, 10 pages.
"Corrected Notice of Allowance", U.S. Appl. No. 13/118,333, Aug. 4, 2015, 4 pages.
"Corrected Notice of Allowance", U.S. Appl. No. 13/118,333, Sep. 14, 2015, 4 pages.
"Extended European Search Report", EP Application No. 11872072.1, Jul. 28, 2015, 7 pages.
"Final Office Action", U.S. Appl. No. 12/983,106, Jul. 16, 2015, 23 pages.
"Final Office Action", U.S. Appl. No. 13/073,300, Sep. 4, 2015, 17 pages.
"Final Office Action", U.S. Appl. No. 13/224,258, Aug. 13, 2015, 39 pages.
"Final Office Action", U.S. Appl. No. 13/550,432, Sep. 14, 2015, 18 pages.
"Foreign Notice of Allowance", CN Application No. 201110437542.1, Aug. 3, 2015, 4 Pages.
"Foreign Office Action", CN Application No. 201210317470.1, Aug. 24, 2015, 9 pages.
"Further Examination Report", NZ Application No. 618284, Jul. 13, 2015, 2 pages.
"Non-Final Office Action", U.S. Appl. No. 13/118,265, Aug. 20, 2015, 18 pages.
"Non-Final Office Action", U.S. Appl. No. 13/118,288, Aug. 24, 2015, 19 pages.
"Non-Final Office Action", U.S. Appl. No. 13/118,321, Sep. 8, 2015, 34 pages.
"Non-Final Office Action", U.S. Appl. No. 14/059,163, Aug. 10, 2015, 5 pages.
"Notice of Allowance", U.S. Appl. No. 13/229,693, Sep. 14, 2015, 13 pages.
"Notice of Allowance", U.S. Appl. No. 14/659,442, Aug. 19, 2015, 4 pages.
Gladisch,"MultiStates:Monitoring Databases With Acoustic and Intuitive Perspective Wall Interaction", In Proceedings of 2nd International Workshop on Design & Evaluation of e-Government Applications and Services, Aug. 24, 2009, 7 pages.
Johnson,"Create an Awesome Zooming Web Page With jQuery", Retrieved from <http://designshack.net/articles/javascript/create-an-awesome-zooming-web-page-with-jquery/> on Aug. 20, 2015, May 25, 2011, 11 pages.

* cited by examiner

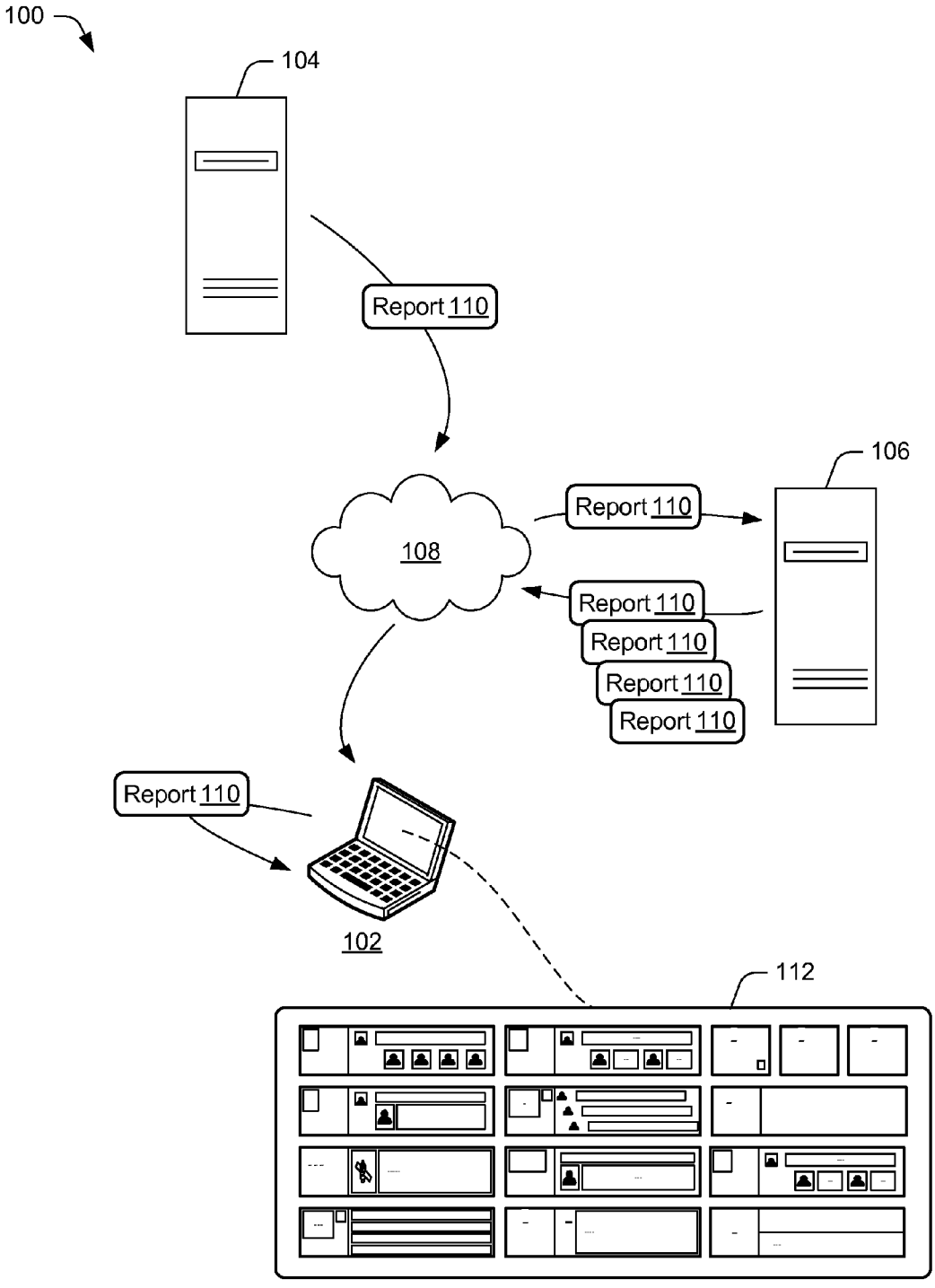

100
104
Report 110
106
108
Report 110
Report 110
Report 110
Report 110
Report 110
Report 110
102
112

Fig. 1

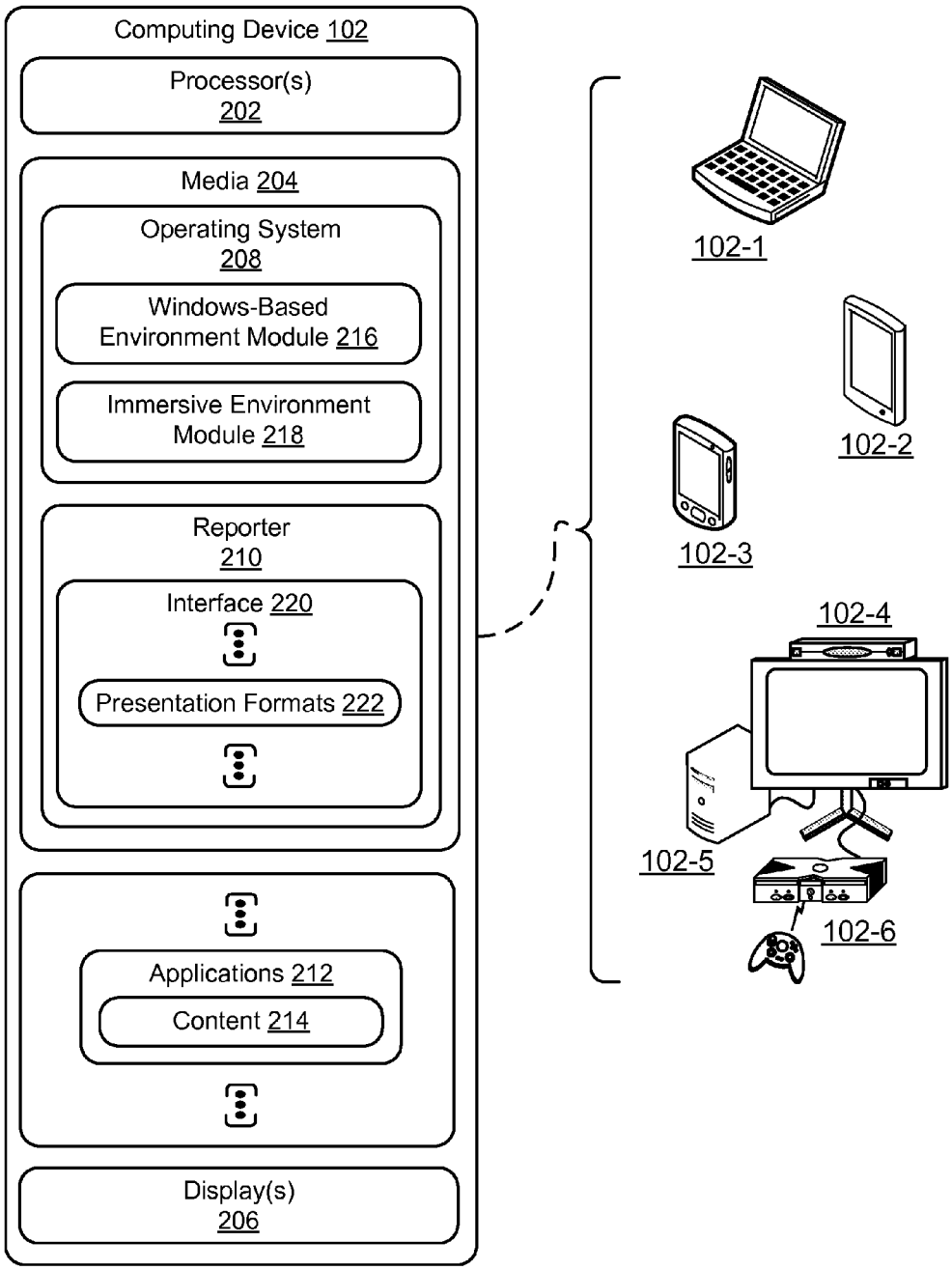

Computing Device 102
Processor(s) 202
Media 204
Operating System 208
Windows-Based Environment Module 216
Immersive Environment Module 218
Reporter 210
Interface 220
Presentation Formats 222
Applications 212
Content 214
Display(s) 206
102-1
102-2
102-3
102-4
102-5
102-6

Fig. 2

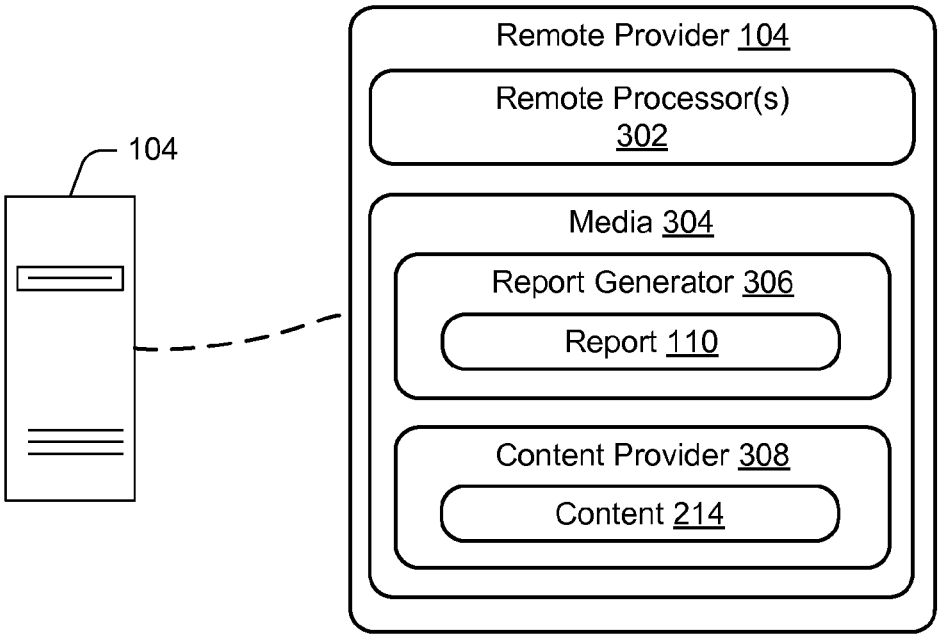

104
Remote Provider 104
Remote Processor(s) 302
Media 304
Report Generator 306
Report 110
Content Provider 308
Content 214

Fig. 3

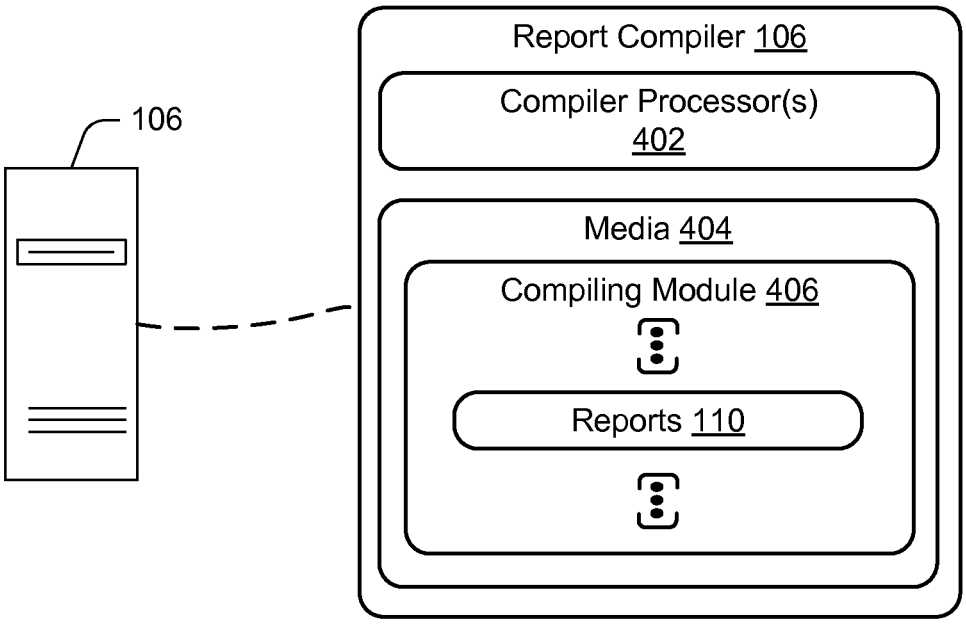

106
Report Compiler 106
Compiler Processor(s)
402
Media 404
Compiling Module 406
Reports 110

Fig. 4

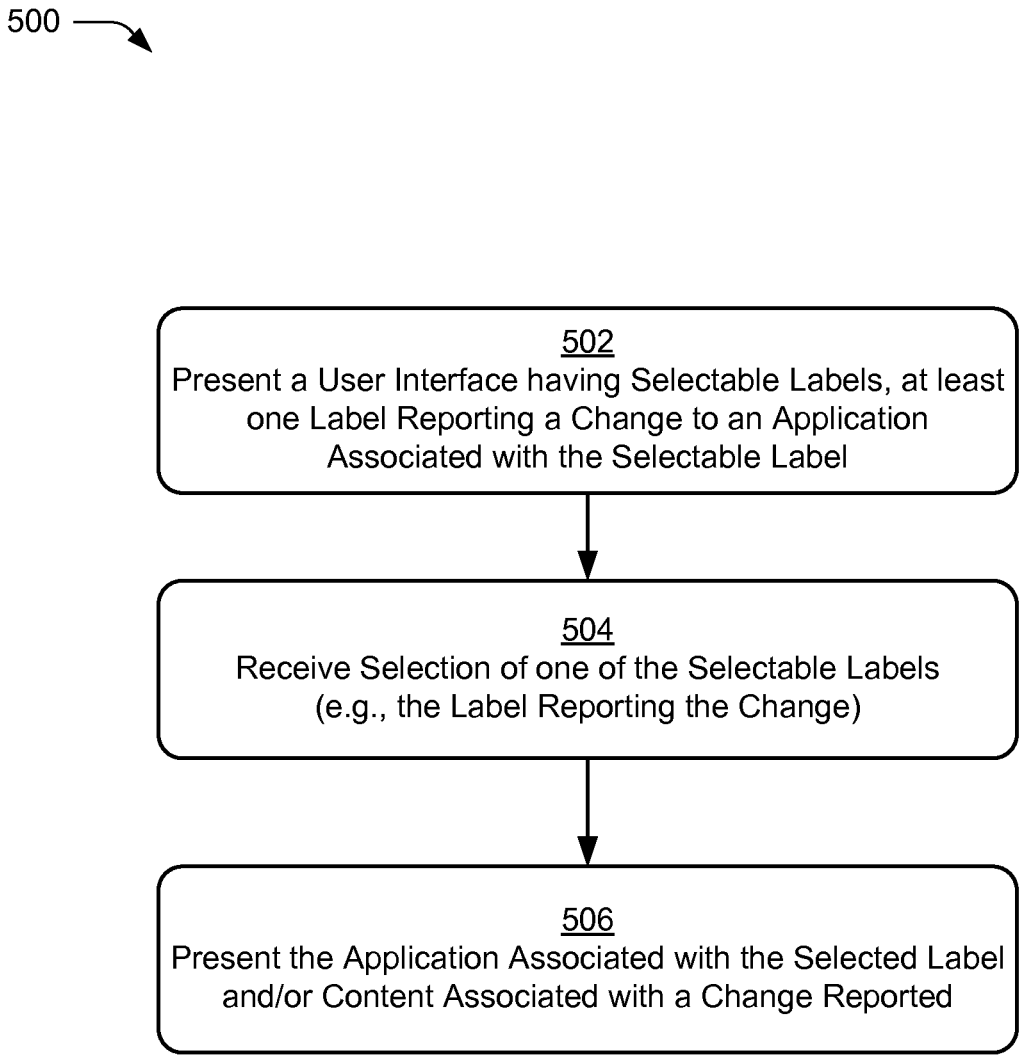

500
502
Present a User Interface having Selectable Labels, at least one Label Reporting a Change to an Application Associated with the Selectable Label
504
Receive Selection of one of the Selectable Labels (e.g., the Label Reporting the Change)
506
Present the Application Associated with the Selected Label and/or Content Associated with a Change Reported

Fig. 5

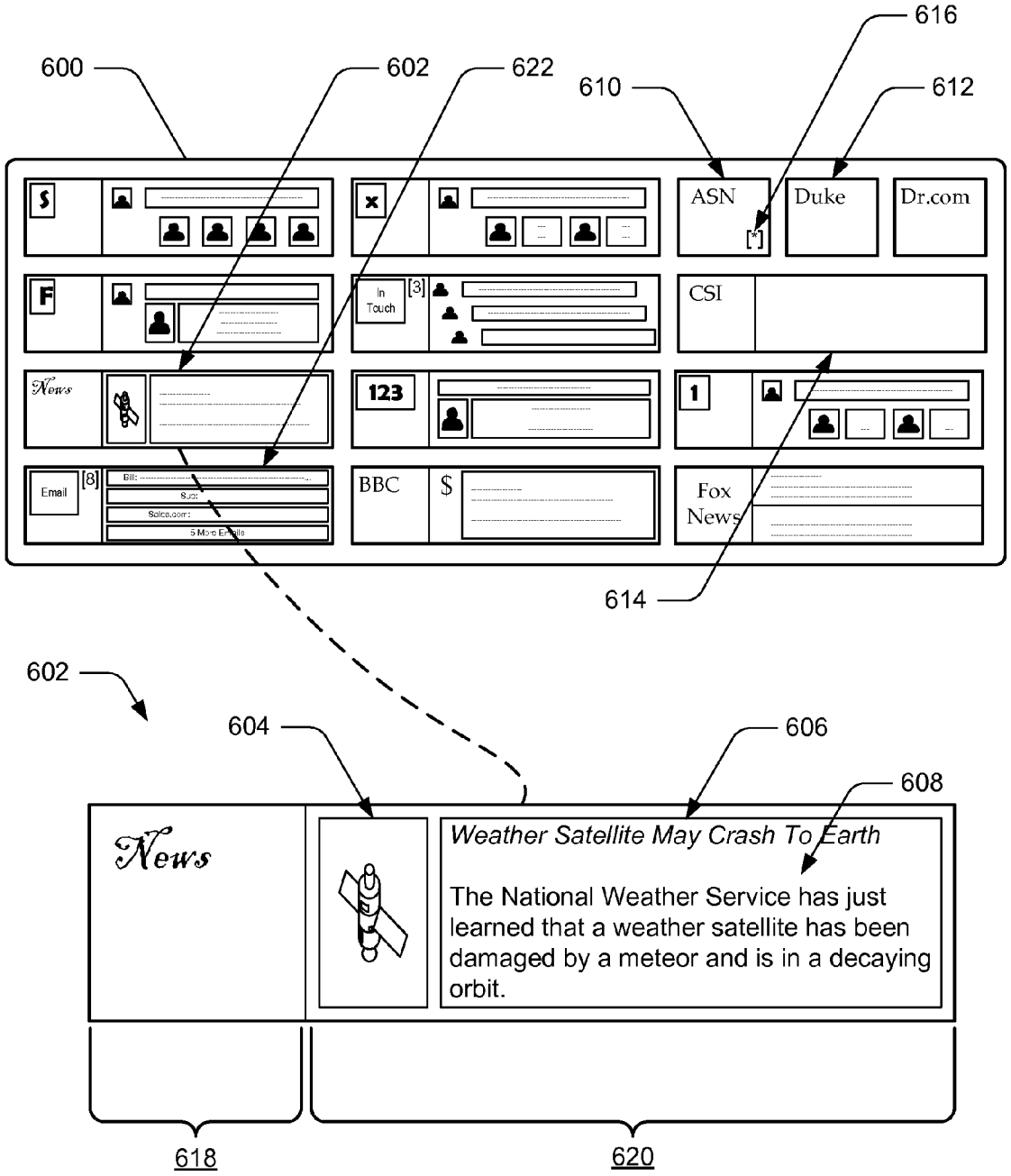

600
602
622
610
616
612
ASN
Duke
Dr.com
CSI
In Touch
[3]
News
123
1
Email
[8]
BBC
$
Fox News
614
602
604
606
608
News
Weather Satellite May Crash To Earth
The National Weather Service has just learned that a weather satellite has been damaged by a meteor and is in a decaying orbit.
618
620

Fig. 6

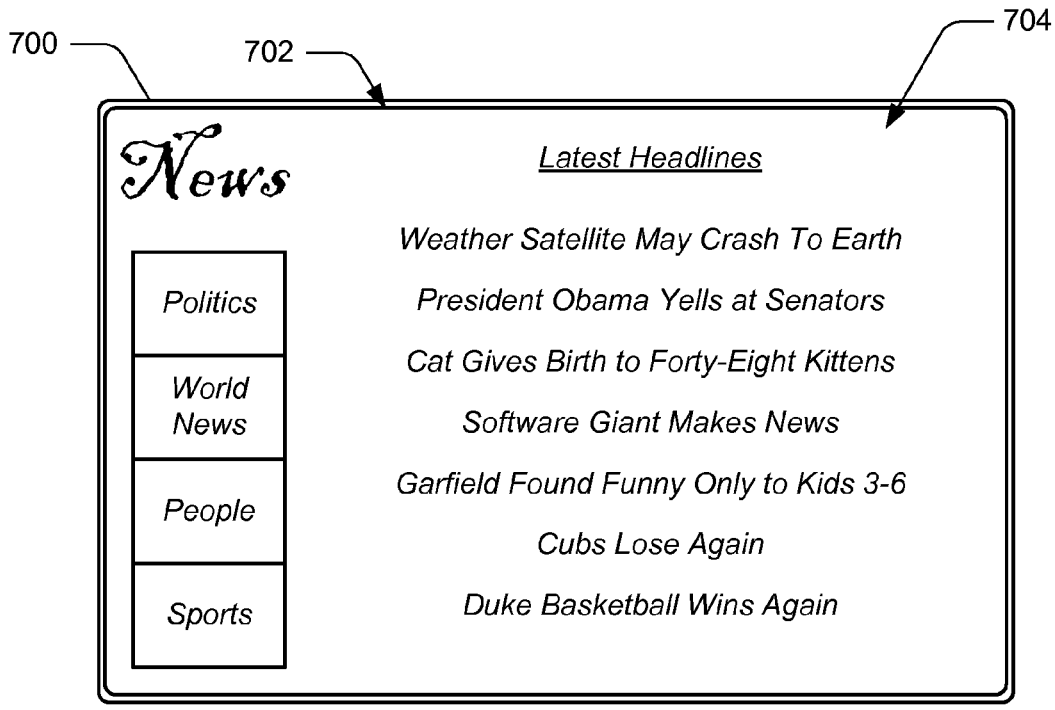

700
702
704
News
Latest Headlines
Politics
World News
People
Sports
Weather Satellite May Crash To Earth
President Obama Yells at Senators
Cat Gives Birth to Forty-Eight Kittens
Software Giant Makes News
Garfield Found Funny Only to Kids 3-6
Cubs Lose Again
Duke Basketball Wins Again

Fig. 7

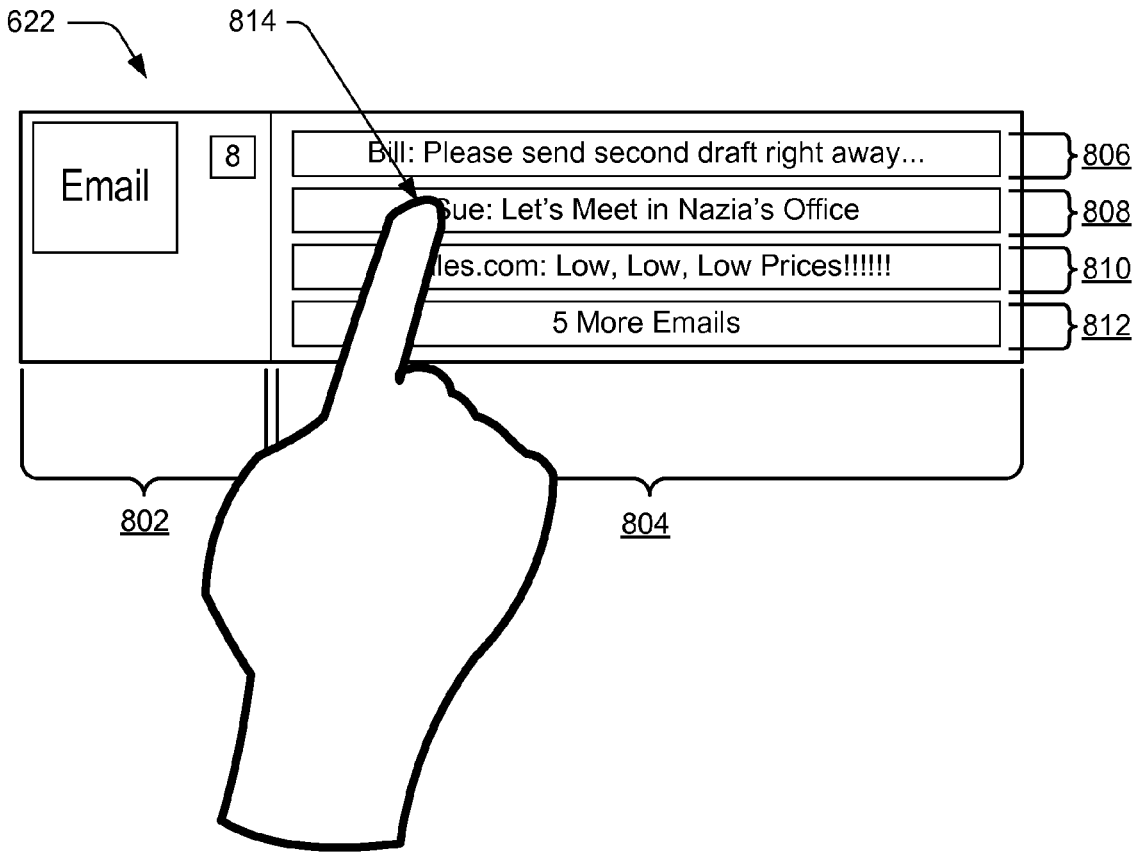

622
814
Email
8
Bill: Please send second draft right away...
Sue: Let's Meet in Nazia's Office
les.com: Low, Low, Low Prices!!!!!!
5 More Emails
806
808
810
812
802
804

Fig. 8

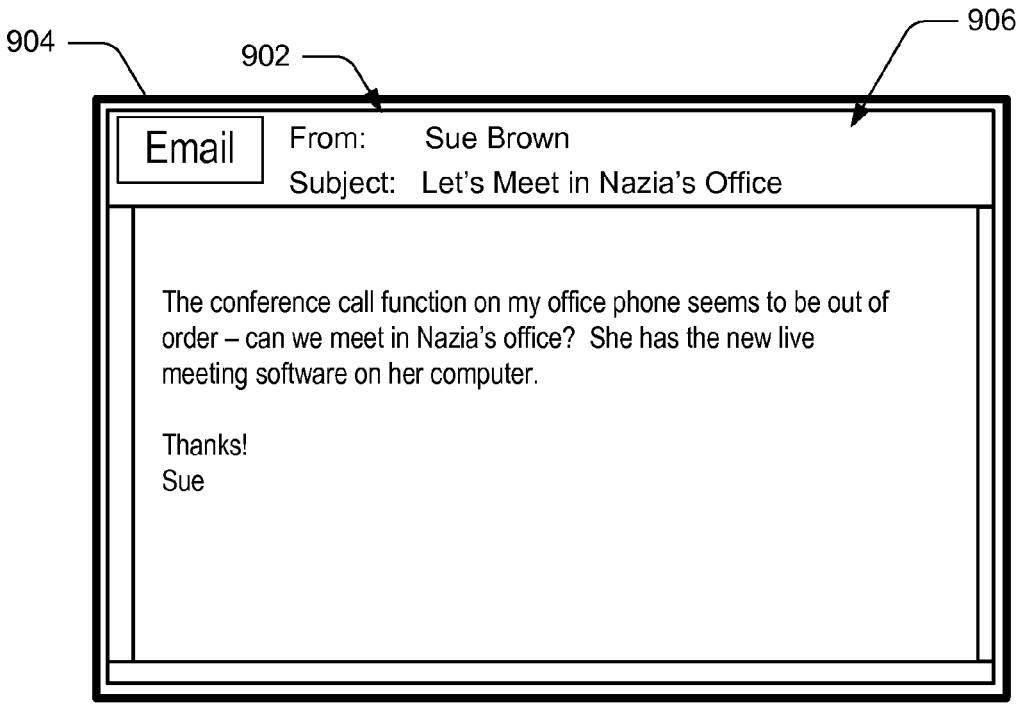

904
902
906
Email
From: Sue Brown
Subject: Let's Meet in Nazia's Office
The conference call function on my office phone seems to be out of order – can we meet in Nazia's office? She has the new live meeting software on her computer.
Thanks!
Sue

Fig. 9

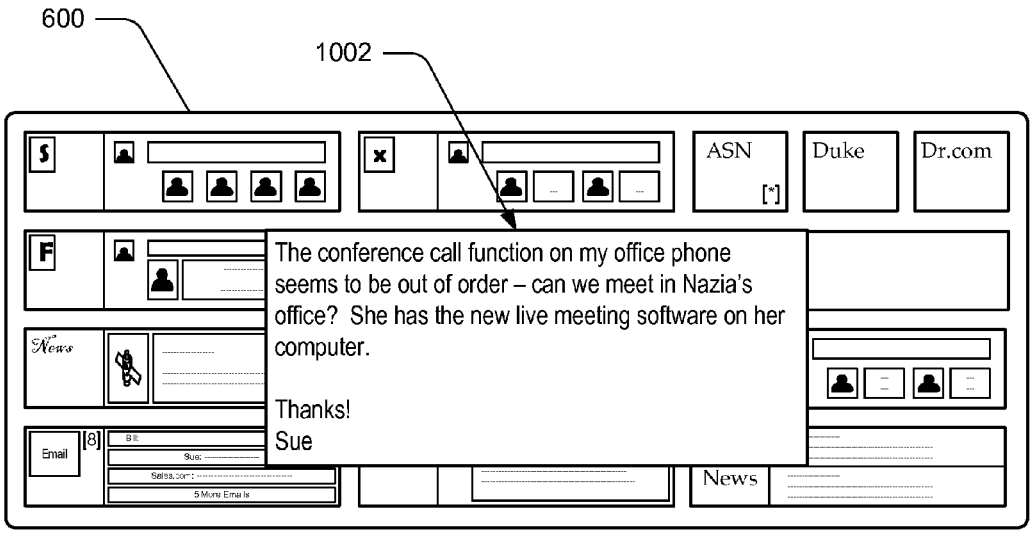

600
1002
ASN
[*]
Duke
Dr.com
The conference call function on my office phone seems to be out of order – can we meet in Nazia's office? She has the new live meeting software on her computer.
Thanks!
Sue
News
Email
[8]
News

Fig. 10

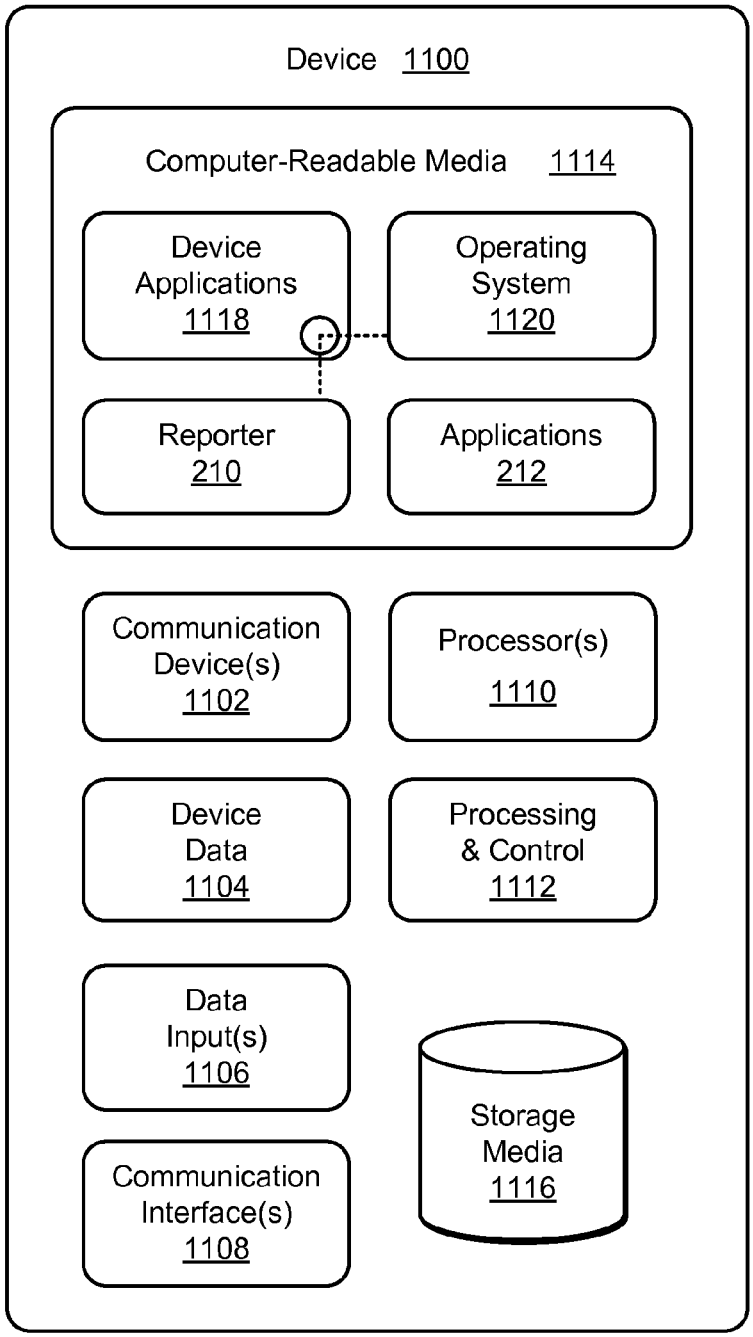

Device 1100
Computer-Readable Media 1114
Device Applications 1118
Operating System 1120
Reporter 210
Applications 212
Communication Device(s) 1102
Processor(s) 1110
Device Data 1104
Processing & Control 1112
Data Input(s) 1106
Storage Media 1116
Communication Interface(s) 1108

Fig. 11

APPLICATION REPORTING IN AN APPLICATION-SELECTABLE USER INTERFACE

PRIORITY APPLICATION

This application is a continuation of and claims priority to U.S. patent application Ser. No. 12/978,184 filed Dec. 23, 2010, entitled "Application Reporting in an Application-Selectable User Interface", the disclosure of which is incorporated by reference herein in its entirety.

BACKGROUND

Conventional operating systems permit users to launch applications, often through a user interface having selectable icons for the applications. In some cases a user selects to launch an application from this user interface and does not care whether there is anything new for that application.

In many cases, however, users launch applications to find out what is new in those applications. A user wishing to find out what is new in her applications, for example, typically selects an icon for a desired application, in response to which the conventional operating system launches the application. This application then opens and, assuming it is one that presents content, presents that content. For some applications, such as news or social-networking websites, the application retrieves content from a remote source and then presents that content. It is at this point that the user sees the content, which may or may not be new since the last time the user viewed content for that application.

The user may continue this process of selecting applications, in response to which they are launched and present content, and then viewing the presented content to find out what, if anything, is new. Following this process will permit a user to see what is new in her applications, but doing so takes significant amounts of time and effort. This process also expends computing and bandwidth resources. Worse still, in some cases her applications may not have any new content, in which case all of this time, effort, and resources are wasted.

SUMMARY

This document describes techniques for application reporting in an application-selectable user interface. These techniques permit a user to view reports for applications in a user interface through which these applications may be selected. By so doing, a user may quickly and easily determine which applications to select based on their respective reports and then select them through the user interface.

This summary is provided to introduce simplified concepts for application reporting in an application-selectable user interface that is further described below in the Detailed Description. This summary is not intended to identify essential features of the claimed subject matter, nor is it intended for use in determining the scope of the claimed subject matter. Techniques and/or apparatuses for application reporting in an application-selectable user interface are also referred to herein separately or in conjunction as the "techniques" as permitted by the context.

BRIEF DESCRIPTION OF THE DRAWINGS

Embodiments for application reporting in an application-selectable user interface are described with reference to the following drawings. The same numbers are used throughout the drawings to reference like features and components:

FIG. **1** illustrates an example system in which techniques for application reporting in an application-selectable user interface can be implemented.

FIG. **2** illustrates an example embodiment of the computing device of FIG. **1**.

FIG. **3** illustrates an example embodiment of the remote provider of FIG. **1**.

FIG. **4** illustrates an example embodiment of the report compiler of FIG. **1**.

FIG. **5** illustrates an example method for application reporting in an application-selectable user interface.

FIG. **6** illustrates an example user interface having fifteen selectable labels.

FIG. **7** illustrates an example presentation of a selected application in an immersive environment.

FIG. **8** illustrates a selectable label of FIG. **6** along with selectable sections reporting changes.

FIG. **9** illustrates an example presentation of a selected application in a windows-based environment.

FIG. **10** illustrates a pop-up window having content associated with a change to an application.

FIG. **11** illustrates an example device in which techniques for application reporting in an application-selectable user interface can be implemented.

DETAILED DESCRIPTION

Overview

This document describes techniques and apparatuses for application reporting in an application-selectable user interface. These techniques enable a user to see a report from an application that may or may not be currently executing and to select this application. If the application is executing, the techniques present the application responsive to the selection. If the application is not already executing the techniques first execute the application.

Assume, for example, that a user wishes to check what is new for her fifteen favorite applications. Assume that the user viewed four of these applications earlier during the day, but did not view the other eleven. Thus, some of these four applications may still be executing, thought that is not required. These techniques present, in a user interface from which these fifteen applications may be selected, reports for each of the applications, assuming any reports have arrived since the respective applications where last selected.

By way of example, assume that reports have been received for two of the four applications viewed earlier in the day. One of these applications is local to the user's computing device, namely an email application. The techniques report, in an application-selectable user interface, that eight emails have arrived since the user last used the email application. The techniques also indicate some content associated with one or more of these emails, such as from whom they were received (e.g., Suzy Brown, Sales.com, etc.).

Assume that the other of the two applications is a social-networking website and that a report has been received that indicates that a friend of the user has added an entry to her social-networking page. The techniques indicate this in the user interface, and may also present content from the entry, such as "Bill Jones tagged you in a photo" along with a thumbnail image associated with Bill Jones (e.g., his picture).

Assume that a third application has received a report, this third application being a marketing website that has not recently been viewed by the user. The techniques report that this marketing website has a big sale going on through tomorrow.

As this example illustrates, the techniques can provide a user interface through which a user can view reports associated with multiple applications and select to present those applications. Here the user interface reports that a friend tagged the user, that a sale is on, and that eight emails from various entities have been received. Further still, the user interface shows that the other twelve applications have nothing new to report.

With all of this information at the user's fingertips, she may decide which application to select and which not to. She may select the social-networking website application to see the image in which she is tagged, the marketing application to see more about the sale, the email application to see the full content of one or more of the eight emails, or forgo selecting any of the applications. Thus, the user may decide that none of these reports are interesting enough to select the applications. In all of these cases the techniques permitted the user to make quick, easy, and informed decisions about what applications to select or not to select.

This is but one example of the many ways in which the techniques enable users to see reports from, and select application through, a user interface. Numerous other examples, as well as ways in which the techniques operate, are described below.

This discussion proceeds to describe an example environment in which the techniques may operate, methods performable by the techniques, and an example apparatus below.

Example Environment

FIG. **1** illustrates an example environment **100** in which techniques for application reporting in an application-selectable user interface can be embodied. Environment **100** includes a computing device **102**, remote provider **104**, optional report compiler **106**, and communication network **108**, which enables communication between these entities. In this illustration, computing device **102** receives reports **110** from three sources, remote provider **104**, report compiler **106**, and an application executing on computing device **102** (this application is shown in FIG. **2**). Reports **110** indicate what is new or of potential interest for the selectable applications, such as a change to an application's content or status (e.g., a new email, entry, or article, or that a software update or expiration is approaching, to name just a few). Computing device **102** presents user interface **112**, which includes selectable labels for applications and reports some or all of the information received in reports **110**.

FIG. **2** illustrates an example embodiment of computing device **102** of FIG. **1**, which is illustrated with six examples devices: a laptop computer **102-1**, a tablet computer **102-2**, a smart phone **102-3**, a set-top box **102-4**, a desktop computer **102-5**, and a gaming device **102-6**, though other computing devices and systems, such as servers and netbooks, may also be used.

Computing device **102** includes or has access to computer processor(s) **202**, computer-readable storage media **204** (media **204**), and one or more displays **206**, four examples of which are illustrated in FIG. **2**. Media **204** includes an operating system **208**, reporter **210**, and applications **212**, each of which may provide content **214**.

Operating system **208** includes or has access to window-based environment module **216** and/or immersive environment module **218**. Applications selected through the techniques can be presented through a windows-based or immersive environment, as well as others.

Windows-based environment module **216** presents applications and accompanying content through windows having frames. These frames provide controls through which to interact with an application and/or controls enabling a user to move and size the window.

Immersive environment module **218** provides an environment by which a user may view and interact with one or more of applications **212** and corresponding content **214**. In some embodiments, this environment presents content of, and enables interaction with, applications with little or no window frame and/or without a need for a user to manually size or position content. This environment can be, but is not required to be, hosted and/or surfaced without use of a typical desktop environment. Thus, in some cases immersive environment module **218** presents an immersive environment that is not a window (even one without a substantial frame) and precludes usage of desktop-like displays (e.g., a taskbar). Further still, in some embodiments this immersive environment is similar to an operating system in that it is not closeable or capable of being un-installed. Examples of immersive environments are provided below as part of describing the techniques, though they are not exhaustive or intended to limit the techniques.

Reporter **210** includes, has access to, or generates an application-selectable user interface **220**, an example of which is shown at **112** in FIG. **1**. Interface **220** includes or has access to presentation formats **222**. Reporter **210** reports changes associated with one or more of applications **212** through interface **220**. As noted above, reports **110** may be received directly from one or more of applications **212**, or another entity associated with one or more of applications **212**, such as remote provider **104** or report compiler **106**.

In some cases a report indicates which presentation format **222** is intended, in which case reporter **210** reports changes in the appropriate format through interface **220**. Presentation formats **222** can be eXtensible Stylesheet Language Transformations (XSLT) in cases where reports **110** are received in eXtensible Markup Language (XML). In such a case, reporting in interface **220** is presenting using Hyper-Text Markup Language (HTML), though use of XSLT, XML, and HTML are optional, as are presentation formats **222** in general.

FIG. **3** illustrates example embodiments of remote provider **104**. Remote provider **104** is shown as a singular entity for visual brevity, though multiple remote providers are also contemplated herein. Remote provider **104** includes or has to access to provider processor(s) **302** and provider computer-readable storage media **304** (media **304**). Media **304** includes report generator **306** and content provider **308**.

Report generator **306** is capable of providing one or more reports **110** to computing device **102**, either directly or indirectly through report compiler **106**. In some embodiments, reports **110** include information useful for indicating a change, presenting content associated with the change, or visiting the application (e.g., with universal resource locators (URLs)).

Report generator **306** may act responsive to reporter **210**, such as a request from reporter **210** for reports **110**, though report generator **306** may also act to periodically send, or consistently make available, new and/or interesting content or data as it become available. Report generator **306** may indicate what is new since a user last selected a particular application, though it may also simply provide reports **110**, with which reporter **210** may instead determine what is or is not new.

Content provider **308** provides content, such as content **214** associated with application **212**. Content provider **308** may act in conjunction with report generator **306**, such as to provide content **214** to report generator **306**, which report generator **306** then provides a portion of (or sometimes all of) in report **110**.

FIG. **4** illustrates an example embodiment of report compiler **106**. Report compiler **106** is shown as a singular entity for visual brevity, though multiple compilers may also be used. Report compiler **106** includes or has to access to compiler processor(s) **402** and compiler computer-readable storage media **404** (media **404**). Media **404** includes compiling module **406**, which is capable of receiving and compiling reports **110** from one or more sources, such as report provider **104**. Compiling module **406** may receive reports for later provision to computing device **102**, such as periodically or when computing device **102** indicates that it is on. Compiling module **406** may determine which changes are new since a particular user last viewed content from an application and provide those of the reports **110** indicating these changes.

Ways in which entities of FIGS. **1-4** act and interact are set forth in greater detail below. The entities illustrated for computing device **102**, remote provider **104**, or report compiler **106**, respectively, can be separate or integrated.

Example Methods

FIG. **5** depicts a method **500** for application reporting in an application-selectable user interface. In portions of the following discussion reference may be made to environment **100** of FIG. **1** and as detailed in FIGS. **2-4**, reference to which is made for example only.

Block **502** presents a user interface having multiple, selectable labels associated with multiple applications, respectively. One of the multiple selectable labels reports a change associated with the application to which the selectable label is associated, though multiple changes for multiple applications or the same application may also be reported. Reporting of one or more changes is not required (e.g., at some times none of the applications will have a change to report).

By way of example, consider a case where reporter **210** of FIG. **2** presents a user interface **600** shown in FIG. **6**. This user interface **600** is but one of many types of user interfaces contemplated by user interface **220** of FIG. **2**, including a user interface having a single label. User interface **600** includes fifteen selectable labels, twelve of them relatively large and three relatively small.

This example user interface **600** reports changes to eleven of the twelve larger labels and one of the three small labels, though any variation of such a presentation is contemplated, such as changes to all or none of the selectable labels. Note that these changes, even if all of these changes were already received at the time a user selects to view user interface **600**, may be presented to each of the various labels and portions of the labels progressively. This progressive alteration of the labels can make user interface **600** look animated. Thus, the changes to the labels are not necessarily made all at once.

Further, in cases where multiple changes for an application are known, reporter **210** may present the newest of the changes or rotate through these changes. Reporter **210** may rotate through changes to maintain a "live" feel to user interface **600** or responsive to activity or inactivity with a label. Inactively with a label may indicate that the currently-indicated change is not of interest to a user. As another of the changes may be of more interest, the most-recent change may be rotated off of a label and an older (but still new) change rotated on to the label.

Consider first selectable label **602**, which is shown expanded in FIG. **6**. This selectable label **602** is associated with one of applications **212** of FIG. **2**, namely a "News" application. As shown, selectable label **602** reports a change associated with this application **212** within selectable label **602**, the change relative to a prior viewing, selection, or launching of this application **212** by a user associated with computing device **102**.

Assume that a user viewed the News application at 9 am and, on viewing user interface **600**, is presented with selectable label **602** reporting a change to the News application since 9 am (at 3 pm the same day, for example). Here the change is a new article concerning a weather satellite that has been damaged by a meteor and may crash to earth. Portions of content associated with the change (the change being the new article) are shown in selectable label **602**. These portions each report the change by indicating that a new article is now available, here with an image **604** of a satellite, a title of the article at **606**, and a first sentence of the article at **608**.

Consider also three other example selectable labels, small selectable labels **610** and **612**, and another of the large selectable labels **614**. Small selectable label **610** reports a change to an application associated with this label, namely the "ASN" application. Label **610** reports a change with a change indicator **616** marked as "*", though this indicator **616** does not indicate how many changes or any content associated with that change. This abbreviated report on a change may be desirable when the application associated with the label is not generally important to the user, or changes are often of a similar type and thus presenting content of the change is not meaningful, or simply because the user desires it.

Small selectable label **612**, on the other hand, does not report any changes. This non-reporting provides the user with valuable information, namely that the user need not select label **612** to see something new for the "Duke" application, as no changes exist since the user last visited the application.

Large selectable label **614** also does not report any changes, thus also providing the user with valuable information concerning changes (or lack thereof) for the "CSI" application.

As described, reporter **210** enables selection of applications and reports changes to those applications. Reporter **210** may also enable different selections through different areas of a label. Consider again label **602**. Here reporter **210** enables selection through application-identifying area **618** and reporting area **620**. This application-identifying area **618** shows an application-selected identifier for the "News" application at **622**, namely "News" in a particular font and color (color not shown). Reporter **210** enables a selection made to this application-identifying area **618** to present the "News" application at a default or prior-viewed setting, such as a home page or a last-viewed page of content. Thus, on selection of application-identifying area **618**, reporter **210** may refrain from presenting content associated with the reported change.

Reporter **210** enables a selection made to reporting area **620** to present the "News" application with the change, such as presenting content associated with the change, here opening a webpage at a universal resource locator (URL) associated with the content change. In such a case, reporter **210** presents the News application having the article that was shown in part in reporting area **620**.

Some labels may indicate multiple changes, such as reporting (with some associated content) the two newest entries to a social-networking website or emails received since the user last viewed an email application. In such a case, reporter **210** enables selection to each section reporting the change to present the associated application with content associated with that change, such as to open one of multiple emails reported.

By way of review, reporter **210** can report changes to various applications responsive to received reports, such as

reports **110** of FIG. **1**, which can be received one-at-a-time, after compiling into batches, and/or from various sources. These reports **110** can be received or retrieved periodically, on selecting to display user interface **220**, and/or in real time. User interface **600**, for example, may alter selectable labels as a user views it due to reports coming in and being reported. Thus, reporter **210** may act to actively update reporting for applications in a user interface through which a user can select applications.

Reporter **210** may determine which reports **110** indicate changes to an application since the user last viewed or interacted with the application, though in some other cases an entity providing the report instead determines this (e.g., remote provider **104**, report compiler **106**, or application **212**).

Further, in some embodiments reporter **210** receives reports along with an indication of a presentation format in which the reports are preferred to be presented. This presentation format preference may be selected by an entity associated with the respective application, such as a social-networking server associated with a social-networking application, or based on user preference. Various examples of presentation formats **222** are illustrated in FIG. **6**. Large selectable label **602**, for example, presents only a most-recent change along with three portions of content for that change. Small selectable label **610**, conversely, presents only a change indicator **616** with no content.

Returning to method **500**, block **504** receives selection of one of the multiple, selectable labels, such as a label reporting a change. The selection received can be to various areas (or sections of areas) of a selectable label, responsive to which reporter **210** presents the application associated with the selectable label, though how presented may vary based on which area is selected. As noted, the application associated with a selectable label may or may not be executing. Consider, for example, large selectable label **602** and another large selectable label **622**. Label **602** is associated with a "News" application of applications **212** of FIG. **2**. Label **622** is associated with an email application of applications **212**. For this example, assume that the News application is not executing and that reports are received from a remote entity associated with the News application, such as remote provider **104**. Assume also that the email application is local to computing device **102** and is executing. Reports **110** for the email application are received by reporter **210** direct from the email application.

Continuing the ongoing embodiment, assume that reporter **210** receives a selection to application-identifying area **618**, such as through a mouse selector or a gesture via a touch-screen displaying user interface **600**, such as one of displays **206** shown in FIG. **2**.

Block **506** presents the application associated with the selected label and/or content associated with a change reported in the selected label. When block **506** presents the application, it does so in a manner in which the application may be interacted with, e.g., in an immersive or windows-based environment. This presentation may also or instead present content associated with a reported change but not necessarily the application itself as described in further detail below.

This presentation may include launching the application and then presenting it, such as in a window via windows-based environment module **216** or in an immersive environment via immersive environment module **218**, both of FIG. **2**. If the application is already executing, a launch is not needed. Responsive to receiving a selection of a selected label, the techniques may provide a visual indication of the selection, such as to animate the selected portion of the label. By so doing, the techniques reinforce the type of selection.

Concluding the ongoing embodiment, reporter **210** presents the News application in response to selection of selectable label **602**, here to application-identifying area **618**. This presentation includes launching the News application, as it was not executing at selection. As noted, reporter **210** may present and/or launch an application through an instruction to another entity, such as the above-mentioned modules **216** or **218**.

FIG. **7** illustrates an example presentation of the News application in an immersive environment **700**. Because application-identifying area **618** was selected, a default presentation (here a home page) for the News application is shown. This home page is shown at **702** and includes various headlines **704** for selection, one of which is the most-recent article also shown at **606** in FIG. **6**. While this title is shown, the home page is presented rather than a webpage having a full representation of the content or otherwise devoted to the article, which would otherwise be presented had the selection been made to reporting area **620**.

By way of another example, consider a case where selection is received at block **504** through large selectable label **622** of FIG. **6**, which is expanded for clarity in FIG. **8**. Label **622** is shown having an application-identifying area **802** and a reporting area **804**. Reporting area **804** includes four selectable sections reporting changes, sections **806**, **808**, **810**, and **812**. Each of selectable sections **806**, **808**, and **810** reports content associated with a change, here each a sender and a subject line of an email. Section **812** reports five changes, here that five other emails have also been received since the email application was last viewed by the user. In this example, selection is received to section **808** through a gesture **814** made to a touch screen.

Reporter **210**, at block **506**, presents the selected email application and content of the email associated with the selection. Here the application is currently executing, therefore reporter **210** does not launch the email application. Presentation of the email application and the change reported, rather than a home or default presentation, is shown in FIG. **9** at **902** in a window **904**. Note that reporter **210** may cause this presentation in a window superimposed over the application-selectable user interface or hide the user interface and present the window in a different environment. Here reporter **210** hides the user interface and presents the email application at **902** showing content associated with the selection received at **906**.

In still another example, consider again FIG. **8**. In some cases selection made to a selectable label indicating a change may present content associated with that change. This presentation may be commensurate with presentation of the application as described above. In some other cases, the content is shown without hiding the user interface and/or without presenting the application in a conventional manner. Assume, for the selection **814** of FIG. **8**, that reporter **210**, rather than presenting the email application and the content, instead presents content associated with the change on its own. In this case, more or all of the content associated with that change is shown. Assume, for example, that most or all of the content associated with a new email from Sue was received in one of the reports **110**. Reporter **210** may present the rest of this content, such as within or superimposed over user interface **600**.

An example of this is shown in FIG. **10**, which shows a pop-up window **1002** having more content associated with a reported change. This may also be used to expand the "5 More Emails" shown at section **812** in FIG. **8** to show, for example,

the sender and subject lines for those emails. This may be used to show some content associated with a change for which no content is currently shown, such as change indicator **616** of FIG. **6**. This alternative operation of block **506** permits a user to select to see more content associated with a change, which in some cases is enough for the user to forgo selecting the application generally.

The preceding discussion describes methods for application reporting in an application-selectable user interface. These methods are shown as sets of blocks that specify operations performed but are not necessarily limited to the order shown for performing the operations by the respective blocks.

Aspects of these methods may be implemented in hardware (e.g., fixed logic circuitry), firmware, software, manual processing, or any combination thereof. A software implementation represents program code that performs specified tasks when executed by a computer processor. The example methods may be described in the general context of computer-executable instructions, which can include software, applications, routines, programs, objects, components, data structures, procedures, modules, functions, and the like. The program code can be stored in one or more computer-readable memory devices, both local and/or remote to a computer processor. The methods may also be practiced in a distributed computing environment by multiple computing devices.

These techniques may be embodied on one or more of the entities shown in environment **100** of FIG. **1** (and as detailed in FIGS. **2**-**4**) and/or example device **1100** described below, which may be further divided, combined, and so on. Thus, environment **100** and/or device **1100** illustrate some of many possible systems or apparatuses capable of employing the described techniques. The entities of environment **100** and/or device **1100** generally represent software, firmware, hardware, whole devices or networks, or a combination thereof. In the case of a software implementation, for instance, the entities (e.g., reporter **210** of FIG. **2**, report generator **306** of FIG. **3**, and compiling module **406** of FIG. **4**) represent program code that performs specified tasks when executed on a processor (e.g., processor(s) **202**, **302**, and **402**, respectively). The program code can be stored in one or more computer-readable memory devices, such as computer-readable storage media **204**, **304**, or **404** or computer-readable media **1114** of FIG. **11**. The features and techniques described herein are platform-independent, meaning that they may be implemented on a variety of commercial computing platforms having a variety of processors.

Example Apparatus

FIG. **11** illustrates an apparatus having various components, here as part of an example device **1100**, which can be implemented as any type of client, server, and/or computing device as described with reference to the previous FIGS. **1**-**10** to implement techniques for application reporting in an application-selectable user interface. In embodiments, device **1100** can be implemented as one or a combination of a wired and/or wireless device, as a form of television client device (e.g., television set-top box, digital video recorder (DVR), etc.), consumer device, computer device, server device, portable computer device, user device, communication device, video processing and/or rendering device, appliance device, gaming device, electronic device, and/or as another type of device. Device **1100** may also be associated with a user (e.g., a person) and/or an entity that operates the device such that a device describes logical devices that include users, software, firmware, and/or a combination of devices.

Device **1100** includes communication devices **1102** that enable wired and/or wireless communication of device data **1104** (e.g., received data, data that is being received, data scheduled for broadcast, data packets of the data, etc.). The device data **1104** or other device content can include configuration settings of the device, media content stored on the device, and/or information associated with a user of the device. Media content stored on device **1100** can include any type of audio, video, and/or image data. Device **1100** includes one or more data inputs **1106** via which any type of data, media content, and/or inputs can be received, such as user-selectable inputs, messages, music, television media content, recorded video content, and any other type of audio, video, and/or image data received from any content and/or data source.

Device **1100** also includes communication interfaces **1108**, which can be implemented as any one or more of a serial and/or parallel interface, a wireless interface, any type of network interface, a modem, and as any other type of communication interface. The communication interfaces **1108** provide a connection and/or communication links between device **1100** and a communication network by which other electronic, computing, and communication devices communicate data with device **1100**.

Device **1100** includes one or more processors **1110** (e.g., any of microprocessors, controllers, and the like), which process various computer-executable instructions to control the operation of device **1100** and to enable application reporting in an application-selectable interface. Alternatively or in addition, device **1100** can be implemented with any one or combination of hardware, firmware, or fixed logic circuitry that is implemented in connection with processing and control circuits which are generally identified at **1112**. Although not shown, device **1100** can include a system bus or data transfer system that couples the various components within the device. A system bus can include any one or combination of different bus structures, such as a memory bus or memory controller, a peripheral bus, a universal serial bus, and/or a processor or local bus that utilizes any of a variety of bus architectures.

Device **1100** also includes computer-readable storage media **1114**, such as one or more memory devices that enable persistent and/or non-transitory data storage (i.e., in contrast to mere signal transmission), examples of which include random access memory (RAM), non-volatile memory (e.g., any one or more of a read-only memory (ROM), flash memory, EPROM, EEPROM, etc.), and a disk storage device. A disk storage device may be implemented as any type of magnetic or optical storage device, such as a hard disk drive, a recordable and/or rewriteable compact disc (CD), any type of a digital versatile disc (DVD), and the like. Device **1100** can also include a mass storage media device **1116**.

Computer-readable storage media **1114** provides data storage mechanisms to store the device data **1104**, as well as various device applications **1118** and any other types of information and/or data related to operational aspects of device **1100**. For example, an operating system **1120** can be maintained as a computer application with the computer-readable storage media **1114** and executed on processors **1110**. The device applications **1118** may include a device manager, such as any form of a control application, software application, signal-processing and control module, code that is native to a particular device, a hardware abstraction layer for a particular device, and so on.

The device applications **1118** also include any system components or modules to implement techniques for application

reporting in an application-selectable user interface. In this example, the device applications **1118** can include reporter **210** and applications **212**.

CONCLUSION

Although embodiments of techniques and apparatuses for application reporting in an application-selectable user interface have been described in language specific to features and/or methods, it is to be understood that the subject of the appended claims is not necessarily limited to the specific features or methods described. Rather, the specific features and methods are disclosed as example implementations for application reporting in an application-selectable user interface.

What is claimed is:

1. A computing device comprising:

one or more computer processors; and

one or more computer-readable storage media having instructions stored thereon that, responsive to execution by the one or more computer processors, perform operations comprising:

presenting a user interface having multiple selectable labels associated with multiple applications, respectively, at least one of the multiple selectable labels:

reporting a first change in a first area of the selectable label, the first change associated with first content of the application to which the selectable label is associated; and

reporting a second change in a second area of the selectable label, the second change associated with second content of the application to which the selectable label is associated;

receiving selection of the selectable label through the first area or the second area; and

responsive to selection of the selected label, presenting, within the selected label, the first content responsive to selection of the first area or the second content responsive to selection of the second area.

2. A computing device as described in claim **1**, wherein presenting, within the selected label, the first content or the second content presents the first content or the second content within the first area or the second area, respectively.

3. A computing device as described in claim **1**, wherein presenting, within the selected label, the first content or the second content presents the first content or the second content within a reporting area having both the first area and the second area.

4. A computing device as described in claim **1**, wherein the operations further comprise receiving selection of the first content or the second content presented within the selected label and, responsive to the selection of the first content or the second content, presenting more content associated with the selected first content or the selected second content.

5. A computing device as described in claim **4**, wherein presenting more content associated with the selected first content or the selected second content presents the more content also within the selected label.

6. A computing device as described in claim **4**, wherein presenting more content associated with the selected first content or the selected second content presents a rest of the content associated with the first change or the second change.

7. A computing device as described in claim **1**, wherein another of the multiple selectable labels includes an area that reports a change and another area that does not report the change and further comprising, on selection of the other area that does not report the change, presenting the other selected application in a default presentation of the other selected application that does not present content associated with the change.

8. A computing device as described in claim **1**, wherein reporting the first or second change presents a portion of the first or second content associated with the first or second change, respectively, within the selectable label.

9. A computing device as described in claim **1**, wherein the operations further comprise:

receiving a report indicating a new change, the new change associated with one of the multiple applications; and

altering one of the multiple, selectable labels to report the new change.

10. A computing device as described in claim **9**, wherein the new change is associated with a different one of the multiple applications than the application associated with the selected label.

11. A computing device as described in claim **1**, wherein the application associated with the selected label is executing prior to reporting the first or second change and further comprising receiving a report having the first or second change from the application associated with the selected label.

12. A computing device as described in claim **1**, wherein the application associated with the selected label is not executing prior to reporting the first or second change and further comprising receiving a report having the first or second change from a remote entity associated with the application associated with the selected label.

13. A computing device as described in claim **1**, wherein the first or second change is a change to content of the application associated with the selected label relative to a most-recent prior presentation of the application associated with the selected label.

14. A computing device as described in claim **1**, wherein the application associated with the selected label, when selected, is not executing, and wherein presenting the first content or the second content includes launching the application.

15. A computing device as described in claim **1**, wherein the application associated with the selected label, when selected, is executing, and wherein presenting the first content or the second content is performed with the first content or the second content received from the application.

16. A computing device as described in claim **1**, wherein the first content or the second content is received in a report associated with, but not generated by, the application.

17. A computing device as described in claim **1**, wherein receiving selection of the selectable label through the first area or the second area receives the selection of a change indicator within the first area or the second area, the change indicator associated with the first change or the second change.

18. A computing device as described in claim **4**, wherein presenting more content associated with the selected first content or the selected second content presents a rest of the first or second content associated with the first change or the second change, respectively, within or superimposed over the user interface.

19. A computing device as described in claim **1**, wherein the at least one of the multiple selectable labels reports a status change in a third area of the selectable label.

20. A computing device as described in claim **19**, wherein the status change is a software update or expiration of the application.

* * * * *